UNDERSTANDING UNIVERSITY CHOICE DECISIONS OF TURKISH

STUDENTS

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BOĞAZİÇİ UNIVERSITY

2011

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STUDENTS

Dissertation submitted to the Institute for Graduate Studies in the Social Sciences

In partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in

Management

by

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Boğaziçi University

2011

Understanding University Choice Decisions of Turkish Students

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June 2001

Dissertation Abstract

Selin Küçükkancabaş, "Understanding University Choice Decisions of Turkish Students"

This study is designed to provide insights as to how different elements of university characteristics, campus visit, information sources, and students" personal characteristics influence their university behaviors directly and indirectly through their effects on university related attitudes.

Proposed relationships are tested with data collected from 421 respondents through structured questionnaires. This study enriches the university choice literature by investigating the effects of various university choice factors on both attitudinal and behavioral responses and proposes that students' attitude toward university mediates the relationship between university characteristics, information sources, students characteristics and student's preference for a university. As expected it is found that while controlling other factors there is a positive relationship between students' attitudes toward university and preference for a university. Results provide evidence that some factors have a significant effect only on students' attitudinal responses, while some have a significant effect on behavioral responses. On the other hand, results demonstrate that advices from significant persons have a positive effect on both students' attitudinal and behavioral responses. Unexpectedly, campus visit does not act as a moderator in the relationship between university perceptions and attitude toward university.

Tez Özeti

Selin Küçükkancabaş, "Türkiye'deki Öğrencilerin Üniversite Seçim Kararlarını

Etkileyen Faktörlerin Belirlenmesi"

Bu çalışmanın amacı üniversite özelliklerinin,kampus ziyaretlerinin, bilgi kaynaklarının ve öğrencilerin kişisel niteliklerinin üniversite seçim davranışları üzerindeki doğrudan ve öğrencilerin üniversitelere yönelik tutumlarına yönelik dolaylı etkilerini araştırmaktır.

Araştırma kapsamındaki önerilerin doğruluğunun test edilebilmesi için 421 kişiden planlanmış anketler kullanılarak veri toplanmıştır. Bu çalışma üniversite seçim faktörlerinin öğrencilerin hem tutumları hem de davranışları üzerindeki etkilerini araştırarak üniversite seçim literatürünü zenginleştirmektedir ve öğrecilerin üniversitelere yönelik tutumlarının üniversite özellikleri, bilgi kaynakları, öğrencilerin kişisel nitelikleri ve öğrencilerin üniversite tercihleri arasındaki ilişkiye aracılık ettiğini önermektedir.

Beklendiği üzere çalışmada diğer faktörler kontrol edildiğinde öğrencilerin üniversiteye yönelik tutumları ile üniversite tercihleri arasında olumlu bir ilişki olduğu bulunmuştur. Çalışmanın sonuçları bazı faktörlerin öğrencilerin sadece tutumları üzerinde etkili olurken bazı faktörlerin de sadece öğrencilerin davranışları üzerinde etkili olduğunu ortaya koymuştur. Diğer taraftan çalışmanın sonuçları referans gruplarının (danışma grupları) öğrencilerin hem tutumları hem de davranışları üzerinde olumlu etkiye sahip olduğunu göstermektedir. Beklenmedik bir şekilde kampüs ziyaretleri üniversite algıları ile üniversiteye yönelik tutumlar arasındaki ilişkide moderatör bir rol oynamamıştır.

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Book Chapter:

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ACKNOWLEDGEMENTS

To my parents

CONTENTS

TABLES

FIGURES

ABBREVIATIONS

KMO	Kaiser-Meyer-Olkin measure of sampling adequacy
VIF	Variance Inflation Factor
SSPC	Student Selection and Placement Center
SSE	Student Selection Examination
NFC	Need for Cognition
GPA	Grade Point Avarage
HEI	Higher Education Institutions
SAT	Scholastic Assessment Test
TEV	Turk Egitim Vakfi (Turkish Education Foundation)
TUBITAK	Türkiye Bilimsel ve Teknolojik Araştırma Kurumu (The Scientific and Technological Research Council of Turkey
ÇYDD	Çağdaş Yaşamı Destekleme Derneği
SES	Socioeconomic Status
TRA	Theory of Reasoned Action
YOK	Yüksek Öğretim Kurumu (The Council of Higher Education)
ASQ	The Admitted Student Questionnaire
CIRP	Cooperative Institutional Research Program Freshmen Survey
SSI	Student Satisfaction Inventory
MMR	Moderated Multiple Regression
ITU	Istanbul Technical University
OSYM	T.C. Ölçme ve Yerleştirme Merkezi (Student Selection and Placement Center)

CHAPTER ONE

INTRODUCTION

This study comes at an opportune moment when there is a growing interest about Turkey,

in particular in the context of the country's progress in transforming its institutions as part

of the crucial developments on the way to joining the European Union.

In recent years there has been an increasing demand for higher education in Turkey

where, as in most other countries, the demand for higher education exceeds the places

available. The Student Selection and Placement Center (SSPC) reported that almost one-

and-a-half million students have taken Student Selection Examination (SSE)[1] in each year

of the last decade. There are several reasons for the increasing numbers of students who

want to enroll in higher education over the years. First, there has been a steady rise in the

number of high-school graduates, and this has increased further after the introduction of the

eight-year compulsory primary education in 1997. Secondly, there is a cumulatively

increasing candidate group, including previous years' under-scorers (who did not perform

satisfactorily on the initial entrance exam). Finally, a considerable number of students who

succeeded in being placed into an academic programme re-take the entrance exam several

times in order to enter their desired academic programme. These three groups of candidates

constitute a significant 'snowball effect' each year. On the other hand over the last few

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[1] As in some other countries, such as China, Japan, and Greece entrance to higher education in Turkey is
determined through a nationwide examination. Universities in Turkey recruit students according to their
scores of an examination that is named Student Selection Examination (SSE). The SSE is held in all city
centers of the country at the same time after students complete their secondary education. This exam gives
students the right to be placed in one of the universities in the country.

years there have been noticeable increases in public and especially in private universities in Turkey, thus universities face a fierce competition. As of 2010, there are one hundred and sixty six higher education institutions in various cities, of which one hundred and four are public and sixty-two are private universities. In response to the increasingly competitive environment, universities are searching for the means to recruit more students.

As the higher education marketplace becomes so keenly competitive, institutions will need to develop strategies that will help them stand out from the crowd rather than operate in the shadows of competitor organizations. Marketing means managing markets to bring about exchanges and relationships for the purpose of creating value and satisfying needs and wants (Kotler and Armstrong, 2001). Therefore, the role of marketing in higher education is about the exchange and delivery of value between those who provide the educational service and those who seek benefit from it. Because marketing is one way in which value can be exchanged and delivered, education needs to embrace marketing philosophy as an integral part of its development and delivery.

Understanding the product's position and the dimensions underlying the potential student's perceptions of the product is vital in developing better marketing strategies in a competitive university environment. It is possible for an institution to influence or change the position of its product by manipulating various factors that affect a person's attitude toward the product. In most cases, comparisons of institutional images based on perceived dissimilarities among institutions are usually made to determine the nearest competitors. A further assessment of distinctive attributes, such as location, institutional size, offerings with those of competitors are functioning and competing in a given market. The feedback from the students can help universities to reexamine their marketing strategies in order to compete and improve their services.

During the university decision process, many students and their families face an important and difficult life decision. Often, this is the first major financial, educational, social, and vocational decision for which they accept total responsibility. The complexity of choosing a university forces students to seek out and integrate information from various sources. Therefore, it is important for researchers to continue studying the university choice process both in practice and theoretical contexts (Galotti and Mark, 1994). Careful consideration of the consumer behavior influencing student university choice will not only address many challenges faced by Higher Education Institutions (HEIs) but also positively affect future institutional marketing strategies (Zusman, 1999).

It is important to know why prospective students choose a particular university. It is also important to know how a student makes that decision, that is, the process they go through. Once these important questions are answered, then the institution can assess its own strengths and weaknesses. It can then identify its image in the community and its position in the market place relative to its competitors. The knowledge of what is important to customers can provide insights into what assets and skills are needed to compete and form the bases of sustainable competitive advantages (Griffin and Hauser, 1993).

A conceptual model of institutional choice would provide all universities with the market intelligence to improve their portfolios and reputations, and facilitate strategic benchmarking between institutions. Much of the work on institutional choice emanates from the United States, where mass education emerged earlier. There is huge variation in the number of choice factors identified by researchers in the USA. In the USA, choice decisions are linked to perceptions formed at a younger age (Foskett et al., 2003), and there is significant variance in the number of factors and their perceived importance. Some surveys signal that support from families and schools is crucial (Archer and Hutchings,

2000), others that non-traditional students have different experiences of the choice process (Connor et al., 2001), that cost is a barrier to university participation (Callender, 2003), and that students underestimate the cost of higher education (Christie et al., 2001). Some find that many students are under-informed about institutional characteristics (Pearson, 1997), others that the complexity of information available can deter some from applying to university (Forsyth and Furlong, 2003).

Although there exist exists a well-defined body of evidence on student choice, research on institutional choice in Turkey is rather limited and none of these studies employs models of choice. Since the vast majority of studies dealing with choice criteria have used a US sample, it could be argued that there is very little cultural distance between these samples. Therefore one of the purposes of this study is to extend the literature on choice criteria in higher education from a different cultural framework-namely Turkey by exploring and determining relevant university choice factors among prospective Turkish students.

The overall aim of this study is to understand university choice decisions of prospective students through an integrative model that incorporates choice stage of the several university choice models (Hossler and Gallagher, 1987; Chapman, 1981; Hanson and Litten, 1982).

This study will yield efficient enrollment management processes through better enrollment planning, student marketing, and recruitment. If universities can predict where applicants will come from and what they will value, scarce resources of universities can be focused on marketing areas that will give the highest return.

This study might interest researchers in the marketing field and the area of enrollment management, admission practitioners, as well as higher education service

providers. On the academic side, the research might fill the gap in the literature, by bridging the disciplines of consumer behavior and university admissions and recruitment. On the practical side, it might broaden the perspectives of admissions officials and counselors on their business. The findings of this study may assist the universities in developing solutions to address the weak points related to needs of prospective students.

Scope of the Study

Although the information related with universities is vast and diverse, for the purposes of this study, student's information processing is classified based on the assumption that student's decision must involve at least limited problem solving, meaning that students find themselves in a high-involvement situation. Because low-involvement decisions in most cases tend to be habitual problem solving which require little prepurchase evaluation and information search (Lilien, Kotler, and Moorthy, 1992), they are not appropriate to the scope of this study.

Before explaining the rationale of the assumption, it is useful to specify the involvement. Need for cognition (NFC) is a personality trait that is conceptualized as a "tendency to engage in and enjoy thinking" by Cacioppo and Petty (1982). Involvement originates from social psychology and the notion of 'egoinvolvement' which refers to the relationship between an individual, an issue or object (Sherif and Sherif, 1967). The involvement construct became linked to marketing and consumer behavior following Krugman (1967)'s measurement of involvement with advertising. At the heart of this concept is the notion of 'personal relevance'. There is a general agreement that a consumer's level of involvement with an object is determined by the extent to which

product is seen as personally relevant (Zaichkowsky, 1985). Researchers generally agree that involvement is a product category-specific phenomenon, with different products arousing different levels of involvement. Nevertheless, in marketing literature, involvement is often equated with perceived product importance (Agostini, 1978; Traylor, 1981; Lastovicka and Bonfield, 1982). However, Kapferer and Laurent (1985) stated in their study that product importance does not capture the full richness of the involvement relationship. On the basis of empirical data, they found that involvement derives from a number of antecedents which are (1) the interest in the product; (2) the rewarding nature of the product (perceived pleasure value); (3) the sign value of the product (perceived ability to mirror the purchaser's personality or status); (4) the perceived importance of negative consequences in case of a poor choice; and (5) the subjective probability of making such a poor choice. These five antecedents mediate the effects of a number of variables on involvement. For instance, since durable goods are expensive, they affect the stakes side of perceived risk. Further, Solomon (1986) stated that one should expect to find the greatest degree of consumer involvement in purchases that are most expensive, risky, self-expressive, or otherwise central to the consumer. Additionally, Coulter et al. (2003) and Harari and Hornik (2010) found that social networks play an important role in facilitating product involvement among young people. This suggests that there is a strong relationship between product involvement and use of social environment such as friends and family as information sources. Based on these arguments, university is considered a high-involvement product. Its involvement stems exclusively from the perceived risk, the subjective probability of making a poor choice without significant persons, expensiveness, and probably the perceived pleasure value of the product.

Also note that some of the student characteristics found in previous research as one of the university choice determinants was not included in this study. For example, several studies emphasize that the traditional and nontraditional age students differ in their choice of a particular university. 'Non-traditional' students are defined by Morey et al. (2003) in terms of their being from segments of the population who have previously been under-represented in higher education, such as mature students, those from lower socio-economic backgrounds, first-generation undergraduates, students from ethnic minorities and students with disabilities. In one of these studies it is indicated that students from less advantaged backgrounds struggle to enter higher education of any kind (Brennan and Shah, 2003) or in the other one it is demonstrated that 'non-traditional' students often find 'elite' and 'traditional' universities alienating, hostile or unwelcoming (Archer and Hutchings, 2000). The argument behind these is that nontraditional students' choice decision could be different than traditional students due to discrepancies in their obligations. For example, older students are more likely to be married, have children, live off campus, and be working, so they have many other obligations in addition to going to school. However, this study only focuses on the traditional age prospective students age ranged 17-21, thus the differences in age are expected to be minimal. Therefore, for the purpose of this study, age is not included as one of the student characteristics.

Finally, the extant literature primarily uses "college" in order to describe higher education institutions. However, in Turkey, college is a term that refers to certain kinds of private secondary education institutions. In Turkey, university is a general term for any post secondary education at the undergraduate and graduate level; an institution where you can earn all kinds of higher education degree. For that reason, university, instead of college,is used to denote higher education institutions for the rest of the study.

Significance of the Study

Similar to the prior university choice models, the aim of this study is to understand how Turkish prospective students' university choice behavior is shaped. In light of the literature reviewed, university characteristics (image, social environment, location), financial factors (affordability of the university and the financial aid offered by the university); information sources (significant persons and university communication efforts) have all been identified as direct influencers of university choice. In general, all of the university-choice models demonstrate that decisions to go to university are the result of a three-stage process that begins as early as seventh grade and ends when the high school graduate enrolls at a given institution of higher education (Hossler, Braxton and Coopersmith, 1989). In undergoing each phase of the university-choice process, high school students develop predispositions to attend university, search for general information about universities, and make choices leading them to enroll at a given institution of higher education. For the purpose of this study, attention is only given to the choice stage of student decision-making process. That means the issue of how students decide to go to university in the first place is not an interest of the current study. It is assumed that the student is deciding to go to university and is ready to search for universities and choose one. During the choice stage, a student selects an institution. However, the details associated with that choice is not clear. Students compare and contrast institutions within the choice set, but what they use as a basis for comparison is not always apparent. The study's significance in this respect is that there has so far been no other university choice model that incorporates these entire antecedent states into a unified body in the choice stage of the university-choice process.

Moreover, a few of the university choice studies specify a model in which the university attributes are the only predictors of the student's university choice. In many cases, the attribute itself is the dependent variable with student characteristics as predictors of the outcome (e.g. gender as a predictor of student's choice of a private university versus a public university). However, with this type of model specification, the net effects of these attributes on the student's university choice cannot be understood. Therefore, one of the purposes of this study is to understand the effects of the students' ascribed (i.e. gender, religiosity), socioeconomic (i.e. parent's education, and parent's income), and academic (i.e. high school GPA) background characteristics on their preference for a particular university based on different university attributes.

Interpersonal contacts with an institution, such as visits to the campus, and conversations with the students of this institution are considered as very important in terms of their influence on prospective student's perception of an institution. In many of the studies, the campus visit is found as a strongly influential university choice factor at all types of universities. On the other hand, research on university choice also revealed that significant persons such as parents, peers, counselors are crucial to student's choice of a university. In terms of the choice process, parental involvement includes participation in their children's course selection, financial planning for university, participating in university campus visits (Hossler, Gallagher, 1987). Moreover, during the university choice process, one of the most valuable contributions high school counselors can make is to help their students develop a good list of potential schools. To help develop that list, firsthand knowledge of university campuses is an integral component. Therefore the campus visits are as important for students as high school counselors to get information about the institution. Through these visits, students, parents or counselors have the chance to

9

communicate with a university. That is, students can use the campus visits as an avenue to gain information on important attributes of universities. Therefore, different from the previous studies, the campus visit is not considered as just one of the communication efforts of the university, it is also considered as a moderator variable which would strengthen the positive relationship between university characteristics, university communication efforts, advices from significant persons and student's choice of a particular university.

More importantly, this study attempts to extend the university choice literature by claiming an indirect path through which university choice behavior is shaped. This relationship concerns the impact of university characteristics, significant persons and university communication efforts, student characteristics on attitude toward a university which is related to choice of a particular university.

Given the sparseness of nationally representative data on the student's transition between high school and postsecondary alternatives, the majority of the university choice studies published have been single-institution studies that focus on institution-specific marketing practices or institutional positioning within certain student market segments. In this study, in order to examine the direct effects of university characteristics (image, social environment, and location), financial factors (affordability, financial aid provided by the university), information sources (significant persons and university communication efforts), the campus visits, student characteristics and indirect effect of attitude toward university on student's choice of a particular university, a broad sample of institutions were used.

To this date, few studies have focused on marketing in the Turkish higher education system. Perhaps this is because the Turkish higher educational system has been a supply market with too many students seeking entrance into limited number of universities. However the increase in the number of universities (public and private) allows a greater

percentage of applicants to gain admission to universities. On the other hand, the challenge of recruiting high quality students has intensified in recent years due to this competition. The changing environment of higher education in Turkey and the lack of recent, scientific studies in this field served as an impetus for this study.

In addition to the contribution of such research to the continuation of existing theory in the fields of higher education marketing, consumer behavior and also services marketing, findings from this study may have implications for students, universities, and national policy makers. The findings of this study give universities an indication of the importance of choice factors considered by prospective students in choosing a university, and enable universities to use their limited funds more efficiently to attract quality students, create a unique position and gain a competitive advantage. Finally, the findings of this study could be used as a basis for further research on university choice.

Summary of the Chapters

The rest of the thesis is organized as follows: Chapter Two reviews the available literature on university choice and develops the theoretical background for this study. In Chapter Three, a model for evaluating university choice is developed and the important points from the literature are explicated as they apply to the various hypotheses offered. Chapter Four focuses on the research design and methodology used. In Chapter Five, the statistical methods used are explained and the results of the study are reported. Chapter Six summarizes the findings of the study, discusses the theoretical and managerial implications of the findings along with the limitations of the study and presents some suggestions for future research.

CHAPTER TWO

REVIEW OF THE LITERATURE

The review of the literature establishes a context for this study by first investigating the role

of marketing and consumer choice theory in higher education. Once the theoretical

background of the study is completed, the focus of the review moves to literature on

university choice models, thus providing a conceptual foundation for this study. The review

of literature concludes with sections which provide examples of empirical research support

related to the variables associated with university choice behavior. University variables,

information variables, and student variables will be reviewed in separate sections, and

empirical research studies related to these variables will be included.

Marketing in Higher Education

Marketing higher education is a relatively new concept that does not appear in the literature

until the 1970s. In his extensive research, Blackburn (1980) found little evidence of the

widespread utilization of marketing techniques in higher education. According to Litten,

Sullivan, and Brodigan (1983), marketing philosophy was introduced into higher education

during a period in which marketing concepts were broadened for use in nonprofit sections.

Kotler and Levy (1969) were the first ones writing in the field of marketing to suggest a

role for marketing in higher education. The two argued that marketing is a "pervasive social

activity" that should be studied and redefined for its broader social meaning rather than

remain a narrowly defined business activity. "Student recruitment" they wrote, reminds us

that higher education is marketing. In fact, they concluded, no organization, business or non-business, can avoid marketing; the only choice is to do it well or poorly. The first edition of the Marketing for Nonprofit Organizations, published by Kotler in 1975, intended to apply marketing principles to governments, museums, hospitals, religions, charity foundations, cultural and social activities, and schools as well. Later on, with the emergence of marketing theory specifically focused on service organizations in the early 1980s, higher education was promptly considered as an appropriate user of service marketing (Litten et al., 1983). Since then, researchers also sought to establish the field's academic legitimacy. After the 1980s, hundreds of dissertations have been conducted related with marketing in higher education and the first and sole academic journal devoted exclusively to the study of marketing in higher education (Journal of Marketing for Higher Education). In 1985, in view of fundamental and radical changes in educational arena, Kotler and Fox published Strategic Marketing for Educational Institutions in order to assist school administrators in meeting their dynamic challenges.

In general, the reasons for business to turn to marketing for help include sales decline, slow growth, changing buying patterns, increased competition, and increased sales expenditures (Goldgehn, 1989). These problems can also be found in higher education. Despite the similar pressure faced by HEIs, the goal of marketing in higher education is and should be different from that of the business sector where profit maximization is deemed as the foremost objective. Institutions of higher education have the responsibility to serve the interests of society. They call for a societal marketing orientation in which the main task of the institution is to determine the needs, wants and interests of its consumers and to adapt the institution to deliver satisfactions that preserve or enhance the consumer's and society's well-being and long term interests (Kotler and Fox, 1995). Litten (1980) also notes that

13

institutions of higher education cannot put aside their social responsibility because, in a majority of the cases, the student only pays a fraction of the purchase price while the rest is paid by the public. Accordingly, these complex interactions among the students, processes, resources, experiences, and environment create a very distinctive marketing situation for higher education. HEIs have to recognize and take these considerations into account while developing their marketing strategies.

Marketing applications to higher education can be categorized as three successive subject areas: marketing research, marketing strategy and marketing communication (Pelletier, 1985). A good marketing effort emerges from marketing research that serves as the base and guide of marketing strategies (Goldgehn, 1989; Kotler and Fox, 1995). Marketing strategies include market segmentation (how to segment institutions and students into different groups), market targeting (what segment the university will serve), branding and positioning (what the university will strive to be known for), and marketing mix (what tools can be utilized to bring marketing plans to reality). Marketing communication involves the use of media to deliver certain messages to target audiences. Effective communication has the potential to create favorable impressions, increase awareness, and motivate purchase decisions (Kotler, 1994). The effectiveness of marketing implementations can be measured through the students' perception of the institutional image and their university choice behavior since the purpose of marketing is to influence people's attitudes and decisions. A successful marketing effort would create a positive image as well as favorably influence the students' university choice (Chen, 2008; Sevier, 1994).

The Role of Consumer Choice Theory in Higher Education

In response to pressures and trends in the higher education landscape (see Chapter 1), there have been expanded efforts by HEIs to understand and influence consumer behavior, and more specifically the university selection process, among their prospective students. Researchers in disciplines outside marketing (e.g., medicine, political science, education, geography, religion) study people who can at times assume a consumer role (as when a prospect student makes choices over which university to go). When researchers in these allied fields do study people in roles that include consumption, consumer choice theory or the consumer behavior field is an adjoining discipline on which each may rely.

Consumer choice theory embraces several disciplines, including marketing, sociology, psychology, and consumer behavior (Seth, Gardner, and Garrett, 1988). The integration of disciplines results in several groupings of attributes or factors hypothesized to lead choice decisions. Seth et al., (1988) describe the decade of the 1960s as the "sunrise of the buyer behavior school". As in the 1950s, many scholars from a diverse area of disciplines began adding new theoretical research. The consensus of all these scholars was that a process oriented theory was needed to explain the complexities of consumer behavior. A process oriented theory was thought to be the best way of exploring the factors of consumers' learning over time and generalizing experiences from several situations.

When we look at higher education as a process, it becomes apparent that the customer in this process is the student. On the other hand, the providers, the educational institutions, just like any other institutions, have as a primary purpose to satisfy their customers. Relying on fundamental marketing concepts, it becomes apparent that once institutions identify needs and wants of the customer, the task of satisfying these needs and

wants becomes more feasible (Eagle and Brennan, 2007). Marketers are the ones to have

taken things a step further to understand how this need is satisfied. If customers do not

obtain what they want and/or need to fulfill their requirements, then marketing fails both

the customer and the organization (Binsardi and Ekwulugo, 2003).

Conceptually, there are many models of consumer choice which seek to model

purchasing behavior and the consumer decision-making process. Such models suggest that

consumers make decisions after moving through a number of stages, and that the process

applies to all consumer decisions, including educational choices. Wilkie (1990) outlines

five stages of the consumer buying process as follows: 1) first stage is need arousal which

leads to interest by the consumer in the product 2) the second stage includes all activities

involved in information gathering regarding and relevant to the need for the product 3) the

third stage involves decision evaluation or examining of all known attributes of the product

4) the fourth stage is decision execution 5) and the fifth stage deals with post decision

assessment and how the consumer's post purchase experience affects the consumer's

attitude and behavior toward the product. Kotler and Fox (1994) view university choice

process as a highly complex decision making process involving six overlapping stages

namely, need arousal, information gathering, evaluation of alternatives, decision, decision

implementation, and post purchase evaluation. These two models are used as a point of

reference for the discussion of the decision-making process for higher education.

The decision-making process for higher education is a lengthy process. Students

have to progress through all of these steps. The steps in the decision making process are a

good point of departure for higher education institutions, helping them to identify areas in

which they can manipulate or influence students' behavior.

According to Wilkie (1990), the first step of the decision making process, need arousal, can be stimulated by either internal feelings of need or by external cues coming to the consumer's attention from personal or non-personal sources. Author outlines these cues as found in the education setting:

- personal external cues in the higher education setting include suggestions from friends, teachers, or parents

- non-personal cues may include university ads, brochures, natural setting of the example

An aroused student may search for more information. According to Kotler and Armstrong (2001), consumers can obtain information from any of several sources such as personal sources, commercial sources, public sources and experiential sources. These sources are also available for students in the higher education marketplace. Students may gather information from personal sources (e.g. family, friends), commercial sources (e.g. university ads, university websites), public sources (e.g. SSPC reports, mass media), and experiential sources (e.g. visiting campus).

Once the student has collected information sufficient to the level of need, called the search process in higher education, the process of decision evaluation, or the choice process begins. During this stage students are believed to attach importance weights to a number of evaluative criteria. The weights they attach to selection criteria are influenced by a variety of factors, including the students' previous academic experience, existing information they possess, the influence of peers and parents, cost of attending a university. In this stage student begins eliminating certain alternatives and moves toward choosing among remaining alternatives. The main purpose of this study is to determine the variables affecting the process of choosing a particular university.

Decision execution normally occurs when the consumer has formulated a ranked set of preferences among alternative products (Wilkie, 1990). Generally, the consumer's purchase decision will be to buy the most preferred brand, but certain factors can effect purchase decision. One of these factors is attitude of others (Kotler and Armstrong, 2001). In the higher education context this could be the parental and peer influence. The other one is unexpected situational factors such as income level, expected product benefits, expected price of the product (Kotler and Armstrong, 2001). Thus, preferences and even purchase intentions do not always result in actual purchase choice.

The last stage is the post decision assessment or post purchase stage. The consumer may experience a degree of satisfaction or dissatisfaction that could influence the consumer's behavior (Wilkie, 1990). A consumer of university who is dissatisfied choice may drop out. The post-purchase evaluation is the attempt by the decision-maker to remove cognitive dissonance from their decisions. This stage may last through the initial enrollment period at the university choice and eventually impact university retention.

Not all consumers will proceed through each stage of consumer behavior. Some may skip some stages. This is especially true in the higher education arena for the population of community university transfer students (Bers and Smith, 1987).

Studying consumer decision-making process provides a basis for HEIs to understand their market and develop a total marketing strategy, since it presents an integrative view of all the characteristics that may influence the student's behavior. Mudie (1978) stated that successfully recruiting new students must begin with market research, and market research needs to begin with a look at the characteristics of an institution's current students, demographic and geographic as well as academic. Therefore the core of the marketing in universities should be to understand the needs and problems of students

and this requires obtaining relevant data about current and potential students, before having any problem launched. Careful consideration of the consumer behavior influencing student university choice will not only address many challenges faced by HEIs but also positively affect future institutional marketing strategies (Zusman, 1999).

University Choice Models

The student university choice literature is replete with models of university choice, providing conceptualizations of the complicated interplay of factors that lead to student university choice (Jackon, 1978, 1982; Chapman, 1981; Hanson and Litten, 1982; Hossler and Gallagher, 1987; Cabrera and La Nasa, 2000; DesJardins, Ahlburg and McCall, 2006). Theories of "university choice" provide explanations as to why a potential student chooses to enroll in a university and which university he or she attends (Manski and Wise, 1983; Paulsen, 1990; Zemsky and Oedel, 1983). The literature details that the university decision making process involves a number of stages through which students pass.

Historically, there have been two dominant modes of inquiry into student decision making, one stemming from a sociologic perspective and the other from an economic perspective. In recent years, there have been some studies integrating the two perspectives in order to develop a more complete picture of university choice process (Hanson and Litten, 1982). All models take the individual student as the central actor. Specific theoretical underpinnings of different studies vary, and this variation leads to differences in the variables studied and the methodologies applied (Jackson, 1982). The three types of models are discussed in their turn below.

Sociological Models

Sociological models have been very important to the student choice literature. Sociologists variously study social structure, social interaction, or social attainment. Haller and Portes (1973) referred to the status attainment process as "sets of events by which individuals come to occupy their positions in the social hierarchies of wealth, power, and prestige". The status attainment process is comprised of the various factors that influence one's desire for certain occupations or status positions (Sewell and Shah, 1978). Status-attainment models differ from economic models in that the latter describe students as rationally deciding which HEI offers the highest value, whereas the former describes a process that considers the decision determinants developed throughout the student's life. Most individuals are part of different social groups and they voluntarily or compulsively adjust to what the group expects them to do. Status-attainment model views student's decision to attend university as calculation of its impact on their social status (Dale and Krueger, 1999).

Status-attainment models focus on the interactive process between broad social environment variables and students' individual characteristics in relation to students' university choices (Hossler et al., 1999). The models focus on the socialization processes that shape the possibilities and ambitions of students since they were born, including family conditions, peer interactions, and school environments. According to social attainment theory, families aim to improve professional status and educational attainment across generations (Alexander and Eckland, 1975).

The sociological model specifies a variety of social and individual factors leading to a student's occupational and educational aspirations (Jackson, 1982). In the derivative model developed by Blau and Duncan (1967), family socioeconomic background and

student academic ability are predicted to have a joint positive effect on aspirations for university (Hossler, et al., 1989). Sociological models of university choice have focused on the identification and interrelationship of factors including parental encouragement (Sewell and Shah, 1978), influence of significant other (Chapman, 1981) and academic performance (Sewell, Haller, and Portes, 1969) as indicators of enrollment in university.

In their study of the status attainment process, the work of many sociologists has focused on the earliest stages of the university choice process. Their greatest contribution to university choice research has been their examination of the factors that influence the process by which a student forms educational aspirations or plans to attend university. Results consistently have emphasized the importance of characteristics of the student's family and high school background, as well as the student's academic ability (Paulsen, 1990). The sociological models generally leave financial factors out of the analysis.

Economic Models

The basic economic model of the decision to attend university, human capital model, specifies a rational decision-making process whereby the potential degree holder calculates the costs and benefits incurred by entering the labor force directly from high school or by going on in various university majors, and then selects that path which maximizes the present value of his or her time and expected lifetime utility (Jackson, 1982). Economic models use the idea that people choose a university based on the level of value that each institution offers. Comparing the costs of a particular institution with the benefits one expects to enjoy gives a rough calculation which also takes into account the individual's personal tastes and preferences (Hossler et al., 1999). The human capital theory considers

higher education an investment and provides a framework for assessing public investment decisions (Becker, 1964). Economists are interested in the relationships between attributes of goods (e.g. university characteristics) and individual choices (Jackson, 1982). The economic model emphasizes the decision-making process of students and their families and the variety of ways in which different student's rate and the use the university attributes to make their final university choice (Hossler, Schmit and Vesper, 1999).

One possible economic model is proposed by Kohn, Manski and Mundel (1976). They use a conditional logit model to research university choice using both student and institutional characteristics. Student background characteristics consist of parental education level and family income. University characteristics involve factors such as the average academic ability of students, educational expenditures, breadth of institutional offerings, and quality of student life. They found that income, cost, academic quality, quality of life, and parental education level have a significant effect on the university attendance choice.

Another economic model was proposed by Manski and Wise (1983). In their study they found that, in addition to costs, income and parental educational level, that the quality of class rank and Scholastic Assessment Test (SAT) scores also positively influenced the attendance decision of students.

The microeconomic theory of demand provides economic concepts, principles, and models for the framework of higher education finance (St. John and Paulsen, 2001). According to demand theory, student demand for higher education is related to university tuition prices and financial aid because tuition prices and financial aid ultimately influence student utility maximization. The students demand theory suggested that more education would be purchased when prices are lower (Berger, 1992).

It is apparent that both economic and sociological models are important to the understanding of university choice. This is because there are logically both sociological and economic factors that influence the decision-making process, and both must be considered. But this articulation does not, in itself, provide the complete picture. Besides, student decisions about university are theoretically eclectic, and therefore, policy or further empirical work cannot rely on a single theoretical perspective. There is a need for more comprehensive models that will incorporate both types of factors to examine the process as a whole.

Combined Models

Hossler et al. (1999) suggest that models that combining both processes may have more exploratory power than single perspectives. Combined models utilize the most powerful indicators in the decision-making process from the economic and social models, providing a conceptual framework that predicts the effects of policy-making interventions (Hossler, 1985). Combined models share components of both economic and status-attainment models. In literature,there exist various types of combined models which contain multiple stages of the university choice process.

The Chapman Model (1981)

The model suggests a set of student characteristics in combination with a set of external influence which ultimately leads students to their university choice. The student characteristics include socioeconomic status, educational aptitude, high school performance

and level of educational aspirations. External influences are grouped into three categories: significant persons (friends, parents, and high school personnel), fixed university characteristics (cost/financial aid, location, availability of the program), and university effort to communicate (written information, the campus visit) with the students. These internal and external characteristics function together to create the student's general expectation of university life and precede the student's university choice and "Entry to University".

<div align="center">The Jackson Model (1982)</div>

This combined model divides student choice process into three phases. First, students' aspirations develop as sociologists suggest they do; these and an assessment of resources combine to yield criteria for evaluating alternatives (preference stage). Next students consider their options, excluding some as unfeasible ones and obtaining information about others. In that stage (exclusion) student narrow their university choice set to their top universities of interest. Often entire classes of options are excluded; some students never consider university, while others never consider anything else. In the final stage, (evaluation), students analyze the positive and negative attributes of each institution and select one to attend.

<div align="center">The Hanson and Litten Model (1982)</div>

One of the models which contribute the most to the literature of university choice is that of Hanson and Litten (1982). Similar to other models, the first stage of this three-stage model

suggests that a student initially decides to participate in higher education. During the second

stage, the student investigates institutions and creates a set of candidates. The final stage

outlined is the student's decision to apply, admittance, and enrollment into the HEI.

Within these three stages, there exist five distinct processes that a student passes

through: having university aspirations; starting the search process; gathering information;

sending applications; and enrolling. This five-step process introduced by Hanson and Litten

shows multiple variables (e.g. race and family culture, parents and counselors, economic

conditions of the environment, financial aid available, recruitment activities of universities,

size and programs of universities) which affect university choice. The Hanson and Litten

model is a cross between Jackson's student-based model and the more institution-based

Chapman model (Hanson and Litten, 1989).

The Litten Model (1982)

Litten's (1982) "Expanded Model of the College Choice Process" focuses on personal and

social phenomena that influence the university selection process. Litten characterizes the

university selection process as a funnel, where a large number of students begin the process

by considering university attendance and a positively smaller number of students go

through the entire process culminating in university matriculation (Bateman and Spurill,

1996). Litten's model consists of three stages. The first stage begins with the desire to

attend a university followed by the decision to attend. The second stage includes the

investigation of potential institutions of higher education. The final stage incorporates the

application for admission, actual admission, and enrollment (Hossler and Gallagher, 1987).

The Davis-Van Atta and Carrier Model (1986)

Their model divides the university selection process into three distinct stages: the inquiry stage, the application stage, and the enrollment stage. The prospective student makes choices over time during the term of the stages, which can also be defined as decision stages. During the inquiry stage, student must narrow the number of possible institutions to a smaller number for more detailed investigation. During the narrowing process, the student comes to acquire a great deal of information about higher education in general and the features of particular institutions. The student is also able to assess chances for admission to particular institutions. This stage takes place over a very long period of time, form the student's preteen years to the senior year in high school, and is subject to many influences placed upon the student (e.g., parents, counselors, and friends).

The Hossler, and Gallagher Model (1987)

The most well known model of this type is that of Hossler and Gallagher (1987). They offer a three-stage model where the interaction of individual and institutional factors produces outcomes in each stage.

In the predisposition stage, students begin to develop plans and aspirations for what they will do after secondary school. The formation of these aspirations may take place over a long period, from early childhood through high school and beyond. Hossler, et al. (1989) defined this stage as a "developmental phase in which students determine whether or not they would like to continue their education beyond high school". The university predisposition stage coincides with a critical point in the student's life during which the

student can be positively influenced by significant others at home or school to acquire the necessary academic qualifications and information needed for eventual university access. Although this stage certainly varies by individual, students typically develop the predisposition for university when they are in primary or secondary school (Hossler, Schmit and Vesper, 1999).

The second stage (search) outlines the dynamic process whereby students decide to which universities they should apply in pursuing their higher education. It is during this stage that greater interaction between students and HEIs begins to occur (Poock and Love, 2001). In the search stage students acquire information from various sources (e.g., institutions, peers, parents) about universities they are considering (Flint, 1992). Students also take entrance examinations (e.g., the SAT and SSE) that are required by some two-year and most four-year institutions. When they take these tests, they can choose to have their scores sent to a number of universities, and that select group typically comprises what is known as the student's "choice set" (Paulsen, 1990; Weiler, 1990).The search stage ends when a student applies to one or more institutions.

The final phase (choice) is the climax of the university selection process (Poock and Love, 2001). The choice stage involves admission, university enrollment, and actual attendance. During this stage, the student weighs the alternatives and chooses to enroll in one of the institutions included in the choice set. A hallmark of this stage is that students move from proximate and internal sources of information, like parents, peers and counselors, to further and external sources of information, like university counselors, friends and university publications. In this stage, governmental and institutional policies govern admission offers and the type and amount of financial aid awarded. Ultimately, students compare alternatives and enroll in an institution.

The Cabrera and La Nasa Model (2000)

Cabrera and La Nasa emphasize three distinct phases or stages in which a high school student's university choice is determined. Each of these three stages has particular cognitive and affective outcomes that cumulatively prepare high school students to make decisions regarding their university education. Model summarizes the process students and families undergo during the predisposition, search, and choice phases, which lead to specific outcomes at various stages by grade level starting with the seventh grade and concluded with twelfth grade level of high school. In undergoing each phase of university choice, search for general information about university leading them to enroll at a given institution of higher education.

Typically combined models involve three stages of student decision-making. Initially, students' aspirations develop as does an assessment of resources, yielding evaluation criteria. Next, these criteria are used as students examine their options and make primary exclusions. Finally, students look at the remaining alternatives and make a selection (Jackson, 1982). The major differences between the models are the descriptions of the intervening variables or characteristics and how they define institution activity to encourage student enrollment (Hossler et al., 1989).

This study will focus on the choice stage of the student decision making process. During the choice stage, a student selects an institution. However the details associated with that choice is not clear. Students compare and contrast institutions within the choice set, but what they use as a basis for comparison is not always apparent. This is what is often referred to in consumer behavior as the "buyer's black box". The buyer's black box is made up of characteristics that influence how the buyer perceives things within the decision

process itself (Kotler and Armstrong, 1991). If marketers or admission administrators could decode the buyer's black box, they could begin to understand the rationality (or irrationality) of the university decision process. On the other hand, once they have an understanding of the process, they could adjust their strategies and thereby better match the decision needs of the potential students.

As this study focuses on the choice stage of the decision-making process, various choice factors used by students will be highlighted below.

Variables Included In the Study

The university choice experience involves a complex set of factors that students must weigh before making a significant choice. Numerous studies have examined the university choice behavior of students at each stage of the university choice process and the results obtained from these studies suggest that the characteristics of students (e.g. gender, socioeconomic status, and academic ability), institutional characteristics (e.g. location, reputation, and financial aid), contextual factors (e.g. parental encouragement, peer's plans), and university communication efforts influence students' decisions regarding university (Chapman, 1981: Litten, 1982; Hossler, Braxton and Coppersmith, 1989: Paulsen, 1990; Perna, 2000).

The variables used in the present study are formulated as follows. First, a comprehensive list of factors was generated from a review of literature and focus groups with prospective students. Depending on the literature, variables included in this study were extracted primarily from the choice stage but they are also taken from the search stage. Next the list reviewed by professors and generalized criteria were identified from the specific statements that had been generated. The support for the inclusion of the variables

also comes from Hossler and Gallagher (1987), Chapman (1981), and Hanson and Litten (1982) models explained above.

Accordingly, in this study the university choice is considered as a product of the interaction of both university characteristics (image, social environment, location, financial aid provided by the university, affordability), the interactions of the university's communication with students and the influence of significant persons in the students' lives (parents, friends, teachers, high school counselors, relatives), the campus visit as well as student characteristics (SES, aptitude, gender, religiosity).

Each of these variables is discussed in detail to serve as the basis for the model that will be proposed in the next chapter.

University Characteristics

Numerous studies have attempted to provide explanations of how consumers search and evaluate brands through the perspective of information processing (Paramewaran and Glowacka, 1995). In the case of university choice, studies continue to demonstrate that institutional reputation, location, cost, financial aid, and social life had the highest average importance ratings throughout the process of the student's university choice (Hossler et al., 1989; Rosen et al., 1998, Armstrong, 2001).

Similarly, Levitt (1980) in his work sees the university offerings as being made up of different products that can be regarded as existing on three separate and distinct levels as the core, tangible and augmented product. When the core benefit is considered it can be seen that students are not buying degrees, they are buying the benefits that a degree can provide in terms of employment, status, and lifestyle. At the second level tangible attributes

might include the physical layout of the campus, facilities, etc. Finally, the augmented product level is made up of intangible attributes such as student grants and scholarships, part-time job opportunities, etc.

In the light of extant literature, image, social environment of the university, location, affordability, and the financial aid provided by the university is specified as university characteristics in this study.

Image

In highly competitive sectors like education, corporate image represents an asset which allows universities to differentiate and increase their success chances. Kotler and Fox (1985) stated that 'a responsive institution has a strong interest in how publics see the school and its programs and services, since people often respond to the institution's image, not necessarily its reality'. For that reason it is important for universities to conduct market analysis to establish their market position and to present institutional image effectively (Ivy, 2001).

The corporate image comprises the entire set of perceptions stakeholders have about an institution (Keller, 1993) and serve as strategic points of differentiation (Madrigal, 2000). Each of these stakeholders will associate different aspects to the institution, thus developing its own image that will affect their behavior towards the institution. Thus, corporate image becomes a multidimensional construct formed by all the impressions and expectations that individuals develop throughout a certain period of time (Howcroft, 1991). Grönroos (1988) indicates that the firm's reputation and credibility are the main dimensions,

whereas Kim (2006) puts emphasis on corporate ability (product quality, financial performance and technological innovation) and corporate social responsibility.

Although the aforementioned arguments are applicable to higher education institutions, researchers who have focused on this sector have identified specific dimensions. As a rule, the aspects that students often associate with universities are related to prestige of the faculty (Rickman and Green, 1993; Card, 1999; Nguyen and LeBlanc, 2001); admission opportunities to top graduate schools (Litten and Hall, 1989; Soutar and Turner, 2002; Velotsou et al., 2004); employment opportunities after graduation (Paulsen, 1990; Gray, 1996; Sevier, 1998; Card, 1999: Mazzarol, Soutar and Thein, 2000); and annual rankings of universities (Bess and Shearer, 1994; Monks and Ehrenberg, 1999; Hossler, 2000). Besides, the increasing emphasis on exchange programs and foreign language policies in Turkish universities has also generated new institutional associations that universities need to consider.

All in all, the images of universities are formed by both students' positive perceptions about the present and the future opportunities offered by the university.

Social Environment

Students want to attend a university that provides entertainment and an atmosphere that will accommodate their needs as well as their wants. Research into the phenomenon of atmosphere in the marketing context is concerned with the influence of environmental stimuli on internal responses and external behaviors of consumers. The dominant theoretical concept used in current studies of atmosphere is the behavioral model by Mehrabian and Russell (1974). This SOR model suggests that the entire stimulus volume

(S) in a specific environment elicits emotional reactions (O), which in turn cause either approach or avoidance behavior (R) toward the environment. Individual predispositions moderate the relationship between the environmental variables and the resulting emotional state of a person (Mehrabian and Russell, 1974).

A major criticism against Mehrabian and Russell's (1974) framework is that it mainly focuses on the emotional states that are created by the environment and may thus underestimate important cognitive reactions. Kotler (1973) discusses the relationship between atmospherics and purchase probability. In his work Kotler (1973) indicates that atmosphere is a quality of the spatial surroundings. This gives rise to an environment-oriented definition of atmosphere, in which atmosphere is equated with perceptions of environmental characteristics. Later, Bitner (1992) has formulated a general model for understanding the impact of the physical environment on individual behavior. Nevertheless, the scope of Bitner's model goes beyond the consumer in the sense that it also focuses on the impact on employees. Perceptions of atmosphere lead to certain emotions, beliefs, and physiological sensations, which in turn influence behaviors (Bitner, 1992).

In the marketing literature, atmosphere has been viewed in relation to customers and especially discussed as a tool for changing consumer attitudes and behavior. However, previous research into the phenomenon of atmosphere has almost exclusively focused on retail stores (Turley and Milliman, 2000). Unlike retail stores and the majority of service settings, the atmosphere prevailing in a university not only provides additional value to the core product, but also creates a unique entertainment value. Indeed, it may itself become the dominant part of the total experience (Kotler, 1973). Thus the effects of atmosphere on students in universities may be even stronger than in the retail context. This assumption is supported by findings from empirical studies. These studies showed that students'

33

university choice is influenced by the social environment of the selected institution (Litten, 1982; Jackson, 1986; King, et al., 1986; St. John, 1991; Weiler, 1996; Dortch, 1997). However, the effects of university atmosphere on students' choice behavior have received comparatively little attention and there is no attempt in the literature to develop university atmosphere as a theoretical construct and to operationalize it for use in empirical studies. To be a unique theoretical construct, it must be further specified in terms of its temporal and spatial limits, as well as its character.

As far as the temporal aspect is concerned, university atmosphere refers to the period of time in which social activities outside class such as music festivals, film festivals, sports activities, and student clubs activities take place. The spatial dimension of the construct is the area inside a university where the students usually relax and get away from the stress and pressures of their studies. Nevertheless, the literature offers some indications of what environmental factors are unique to the university environment. For example, Dortch (1997) found that campus activities such as cultural events and sport games are important for influencing students in the search and choice stages. In Litten's (1982) study, campus clubs and activities outside class were found as important in prospective student's choice of a particular university. Based on these limited observations, in this study, (student activities outside class, sport activities, student clubs and campus attractiveness, wide range of majors) are chosen to represent the conceptual content of the formative part of university atmosphere. Moreover, depending on the university choice literature, in this study social environment used in order to explain university atmosphere itself.

Location

In the consumer choice literature, location has always been central. Choice literature usually assumes that the customer cares about patronizing the closest facility. In the way of explaining this situation social scientists have drawn an analogy between the spatial interactions of individuals and Newton's law of gravity (1686) in physics. Nearly eighty years ago, Reilly (1929) formally applied the Newton's (1686) gravity concept to retail geography, and many models of shopping behavior have been developed based on the concept of retail gravitation. Reilly (1929) and Converse (1949) stated that "the probability that a customer patronizes a facility is proportional to its attractiveness and inversely proportional to a power of distance to it". Basically, gravitational theory assumes that consumers patronize the closest store supplying the specific good that is sought. Because distance is a disutility for the consumer, as distance increases, utility declines. From this perspective, access to transportation is found as one of the key variables determining a firm's location choice (Sassen, 2002).

In the university choice literature location has also been viewed as part of students' value perceptions in addition to other dimensions (Rickhard and Walters, 1984; Sevier, 1996). Consistent with the gravitational theory much of the existing research interested in the role of location on university choice has revealed that students prefer universities close to their home and which have convenient and accessible transportation (Sevier, 1994; Absher and Crawford, 1996). Even though the critical importance of location in the area of university choice is fairly well-known, extant research has completely ignored crucial features of the location choice as studied in the retail marketing literature. Nevertheless, based on relatively less and incomplete evidence in university choice literature on location

of the university included as one of the university characteristics that will have a significant influence on student's choice of a particular university in this study.

Financial Factors

Historically, price has been the major factor affecting buyer choice. In the narrowed sense, price is the amount of money charged for a product. More broadly, price is the sum of all the values that consumers exchange for the benefits of having or using the product. Costs set for the floor price that the company can charge for its product (Kotler and Armstrong, 2001). As costs and benefits vary according to individual circumstance and choice of action, consumers are assumed to respond systematically to these economic forces, resulting in different patterns of search and decision-making., In competitive markets like education consumers (students) similarly, compare the costs and benefits of different decision (university choice). In the university choice literature cost and financial aid are often stated as part of university characteristics which influence a student's university choice (Chapman, 1984).

A vast majority of university choice literature concentrate on the importance of the entire cost of university in students' choice decision. The entire cost of the university includes the total cost of university attendance, living, transportation and food expenses (Sevier, 1994; Paulsen and John, 1997; Choy, Ottinger and Carrol, 1998). As cost and money savings are important for students, Turkish Universities trying to demonstrate their particular advantages or benefits to students. For example they are offering discounts or convenient ways of paying fees for special students such as children of veterans and martyrs, teachers and professors. Further, in addition to discounts (e.g. Kadir Has

36

University, Yeditepe University) they are offering internship opportunities (e.g. Istanbul Ticaret University, Istanbul Aydin University) to gifted and talented students and helping their housing, food and travel expenses (e.g. Istanbul Sehir University, Bogazici University, Fatih University, Galatasaray University, ODTU, Halic University).

A long-sought goal of financial aid has been for both "meeting need" and "rewarding talent". These dual purposes of need-based aid and selective admission have had powerful effects in shaping both institutional and governmental policies for higher education finance in the past decades (McPherson and Schapiro, 1998). Some theorists cited that receiving aid is more important than the amount of aid received, because that aid becomes the substantive way the institutions communicate that "we want you to be part of our community" (Jackson, 1978; Abrahamson and Hossler, 1990). Chapman (1984) stated that if cost is an obstacle for the university bound student, then financial aid should reduce or eliminate the problem. Related literature models financial aid as a composite of need and non-need based institutional gift aid, grants and scholarships, and fee remission as employee benefits, (Gross, Hossler and Ziskin, 2007).

Grants and scholarships are the generic subsides to students that do not have to be repaid. In Turkey, there are various scholarships awarded by diverse foundations, municipalities, associations, universities for students planning to pursue a specific field of study or planning to study abroad or that have high score on the student selection exam or need financial support (e.g. TEV, Istanbul Buyuksehir Belediyesi, TUBITAK, ÇYDD). Further, some universities give gifts such as Laptops, books to talented students (e.g. Sabanci University, Bahcesehir University). Some universities also provide part-time job opportunities for the duration of their studies and a job guarantee after graduation (e.g. Istanbul Medipol University, Turgut Ozal University).

37

Information Sources

The consumer attitudes are strongly influenced by personal experience, reference groups, and institutions' marketing communication mix. If a product proves to be to their liking, then it is likely that consumers will form a positive attitude and be more likely to repurchase and/or recommend the product. In a complex choice situation, information search may come from two sources: internal memory and external information search. If the information is strongly associated with stimuli, no complex retrieval strategies are required (e.g. favorite brand name purchased frequently), but when information stored in memory is not sufficient a consumer may seek information externally (Mangleburg, Grewal, and Bristol, 1997; Shim, 1996). These external information sources can be any people or reference groups or mass media advertising.

Within the context of consumer behavior, the concept of reference groups is an important and powerful idea. A reference group is any person or group that serves as a point of comparison (or reference) for an individual in forming either general or specific values, attitudes, or a specific guide for behavior (Schiffman and Kanuk, 2007). As consumers come in contact with others, especially family, close friends, and admired individuals (e.g. respected teacher) they form attitudes that influence their lives. There is also a broad agreement among managers, marketing researchers, and sociologists that consumer interactions through word-of-mouth (WOM) can have a major impact on consumer response to a product and the accompanying advertising (Arndt, 1967; Danaher and Rust, 1996; Herr, Kardes, and Kim, 1991). WOM may play a more important role especially when the product in question is more risky or uncertain (as in university) and when consumer's involvement with that product is higher (Rogers, 1995).

Attempting to understand the difficult, complex decision-making process prospective students go through as they make a university choice is at times as challenging as the decision itself. Indeed, students endure a great deal of pressure, concentration, and opportunity costs as they go through this high involvement, extensive decision-making process. Significant time, effort, and money are involved as the student and parents search for the different universities. Making a mistake and picking the wrong school may have personal and social risks (Kotler and Fox, 1995). For that reason, individuals in comparable circumstances such as parents, relatives, peers, teachers, counselors serve as reference persons because of their specific product knowledge and experience. Especially those students who know that they cannot visit every school they are interested in rely on secondhand information from these reference persons. Besides, as the core service of a university teaching is intangible in nature students heading to rely on sources of information such as WOM recommendations (Athiyaman, 2000).

Further, as university choice is considered as relatively a high-involvement decision more weight placed on the importance of making the correct decision, thus, consultants may be needed to maximize the probability validated in the desired manner by relevant others (Solomon, 1986). Solomon (1986) put forward a surrogate consumer concept to clarify these consultants and defined them as an agent retained by a consumer to guide, direct, and/or transact marketplace activities.

Similarly, Kotler and Fox (1985) brought in stakeholder concept to education marketing literature which emphasizes the importance of parents, government, etc., all of whom have a stake in the education process. In that view, university choice is seen as the product of complex process taking place within the context of an student's social environment, thus their choices are never free of the influence of their social environment,

39

with the implication that replication of choice and values from generation to generation are a significant element in understanding broad patterns of choice in education markets (Brown and Foskett, 2000). Hence Kotler and Fox (1985) stated that marketing efforts should not only be directed to students but the entire range of stakeholders.

Extensive marketing communications also play an important role in university decisions of students. In countries where students have easy access to newspapers, variety of magazines and television channels are constantly exposed to new ideas related to universities. In these, universities hone their image by touting their institutional attributes (Wanat and Bowles, 1992). Thus, these mass-media communication provide an important source of information that influences the formation of students' attitudes toward universities.

Multipage direct-mail publications such as university catalogs, brochures also have an impact on university choice (Cook and Zalloco, 1983). However, with the stampede to the internet, although printed catalogs remain the primary medium, more and more catalogs are going electronic and most of the universities are using web based or video catalogs (CDs). Moreover, modern day students, without a doubt are the most technologically advanced and experienced than any previous generation. These students have a computer available for use at home or at school, often with internet access. As what is placed on the WWW is visible to the outside world and thus represents the university to a market potentially greater than any other medium it is one of the most important sources of information for prospective students.

Above all, there are some key points to consider about university communication efforts. Communication objectives, nature of message content, mix and frequency of media used to convey messages, selection of target audiences, and evaluation of communication

effects should be addressed appropriately. That is, university must be aware of how students prefer to receive information (Paulsen, 1990) and it must attentively coordinate the dissemination of a consistent image and messages through printed, visual and electronic materials. Further, no matter what tools are used, all communication should reach at least one of these goals: establish awareness of the existence of the universities, create and maintain interest in university, or motivate the prospect to take action (Berger and Wallingford, 1996).

The Campus Visit

As consumer attitudes are strongly influenced by personal experience, the campus visit is the only way for students to personally experience the university. The campus visits enable students to discover how students typically live and to talk to some of the students who are already enrolled at the institution which all may help them to feel how friendly the campus and department are, and whether this institution will suit them personally, socially, and academically (Lei and Chuang, 2010). The campus visit can allow potential students to experience the social environment in which they will live and work during several critical years of their lives (Barron, 2008). In short, the campus visits provide a unique opportunity to give tangible evidence of educational experience offered by the university (Yost and Tucker, 1995).

Students go to campuses with certain expectations, and meeting current students, talking to faculty, visiting amenities offered by the university often shapes their perceptions. Therefore the importance of the campus visits cannot be overestimated.

Student Characteristics

One of the basic premises of this study is that due to some personal characteristics students may vary in their perception of some of the university characteristics that, in turn, impact their behaviors toward universities. There has been much interest in choice of universities by students and whether different constituencies in the student body enter different types of universities. Gender (David et al., 2003), socioeconomic status (e.g. Reay et al., 2005; Brooks, 2005), aptitude (e.g. Chapman, 1981; Dahl, 1982; Hossler and Stage, 1992), and religiosity (e.g. Schwarzwald and Leslau,1992; Sander, 2005; Cohen-Zada and Sander, 2008) are some of the factors that have been explored.

In every society, it is easy to find products that are both exclusively and strongly associated with gender. It is, therefore, worthy enough to fit gender in the category of sub-culture (Schiffman and Kanuk, 1996). For that reason, when probing to find out the factors that influence students' choice of a particular university, one question may be raised is, do males and females differ in their decision making for a university to be enrolled in. Despite this, the research on differences in university choice based on gender is relatively limited (e.g. Radner and Miller, 1975; Astin, Harway and McNamara, 1976; Hanson and Litten 1982; Stage and Hossler, 1989; Joseph and Joseph, 1998; Kinzie et al., 2004). Further, the available research suggests that the relationship between gender and university-choice outcomes is ambiguous. Some research shows that university choice process is different for women than for men (e.g. Stage and Hossler, 1989), but other research suggests that there is no difference between them (e.g, Elsworth et al, 1982; Carpenter and Fleischmann, 1987). Nonetheless, it is believed that understanding the decision-making styles differences of male and female students would obviously be of great benefit to universities in finding

better ways of communicating with male and female students and in guiding marketing strategy and marketing mix decisions. Therefore, for the purpose of the study, it is decided to give attention to the differences between female and male students.

Social class is the division of members of a society into a hierarchy of distinct status classes, so that members of each class have relatively the same status and members of all other classes have either more or less status (Schiffman and Kanuk, 2007). Studies using sociological lens states that students' socioeconomic status play a significant role in university decision making activities (e.g. Hossler et al., 1989; McDonough, 1997; Terzini, Cabrera and Bernal, 2001). For prospective students from low socioeconomic status families the university choice process is generally different from what it is for students from high socioeconomic status \families. Chapman's (1981) model examines SES as a factor shown to influence the likelihood of a student's university choice at a particular university which is relative to institutional cost. Further, the Cabrera and La Nasa model (2000) illustrates the relationship between SES and university choice, but they define the "parents' collegiate experience" as an indicator of university choice. In short, in university choice literature, social status is stated to influence university choice because the choices made by students and encouraged by their families are the manifestation of the expectations of what type of education is expected to maintain or change social status.

Student academic ability is another characteristic associated with university choice. Extant research has demonstrated that academic ability is positively related to students' decisions to participate in postsecondary education as well as to the final choice stage of university choice (e.g. Dahl, 1982; Hossler and Stage, 1992). Chapman's (1981) model examines students' aptitude or high school achievement as an external factor to university enrollment. Similarly, according to Manski and Wise (1983), a high school student's GPA

is very strong indicators of their enrollment into higher education. Chapman (1981) indicated that high school performance "may trigger a whole set of other responses to the student that, in turn, help shape university choice".

Societal factors affecting consumer behavior ranges from culture and family to social class and lifestyle. Among those, religion is considered as a sub cultural factor and often seen as a taboo to be discussed in marketing literature. Thus, the studies investigating the relationship between religion and consumer behavior are limited. Religiosity in general is defined as the degree of an individual's belief in his/her religion (Essoo, 2004) and often used synonymously with religious commitment (Lindridge, 2005). In university choice few of the empirical and theoretical studies on university choice have directly taken into account the effects of religion and religiosity. Moreover most of them focus on the effects of religion and religiosity on participation in a religious school (e.g. Schwarzwald and Leslau,1992; Sander, 2005; Cohen-Zada and Sander, 2008).

However, in Turkey, religion is increasingly having a strong influence over the society as a result of dominant wind of Islamist-oriented political parties. Therefore, marketers promptly started to use this strong and easy to use tool to attract, affect and control other people. For example in their studies Sandikci and Ger (2007) showed how the consumer position has been shifting in Turkey and has started to be identified as "the Islamic consumer" in terms of his/her clothing style. Considering the changing environment in Turkey and the general influence of religion on society value systems and the effect of these value systems on consumer behavior, religion is included as one of the variables that will affect students' choice of a particular university.

Attitude toward University

Consumer researchers have studied the construct of attitude and the problem of the relationship between attitude and behavior in great depth. Attitudes are evaluative statement favorable or unfavorable related to person, object or event. They reflect that how one feel about something. Several attributes can be used to explain each individual's overall evaluative attitude toward competing brands. These attributes may be thought of as variables which are relevant to the class of stimuli being compared. The individual is assumed to associate some particular level, or amount, of each attribute with each stimulus. This perception summarizes the individual's evaluative belief about the stimulus on this particular attribute. Each individual has a preferred amount of attribute which he/she would like a stimulus possess. The overall attitude is indicated by the individual's relative preference among similar stimuli (Beckwith and Lehmann, 1973).

Attitude is directly related to predisposition, consisting of both the evaluation of the object in terms of the decision-mediator criteria of choice, and the confidence with which that evaluation is held. Attitude toward object is the consumer's evaluation of the object's potential to satisfy his/her motives. It therefore includes those aspects of the object which are relevant to the consumer's goals. In this study, attitude toward university modeled on the basis of students' favorable perceptions about university characteristics, significant persons, university communication efforts, and the resultant measure used to predict choice of a particular university.

There is a strong tradition, particularly in economics, to equate preference with choice. Preference is considered to be a hypothetical choice, and choice to be revealed preference. Hence, the Arrovian framework in social choice theory conflates choice and preference and treats these as essentially synonymous concepts. A preference is a potential choice, whereas a choice is an actualized preference (Reynolds and Paris, 1979). Arrow (1977) defines preference as choice from two member sets.

Although preferences and choices are often conflated, they are different in nature. Preferences are parts of states of mind. That a person prefers A to B means that she considers A to be better than B. Choices are actions. Nonetheless, multiattribute research in marketing has focused on the evaluative aspects of choice. A majority of the articles utilized stated preference as the criterion variable (e.g. Bass, Pessemier and Lehmann, 1972; Axelrod, 1968). Following the same line of reasoning in this study preference measured as a pattern of choosing a particular university. For that reason, stated preference will be used to denote actual choice behavior for the rest of the study.

CHAPTER THREE

CONCEPTUAL MODEL OF THE STUDY and HYPOTHESES

Based on the theoretical insights discussed in the previous chapter, this chapter proposes a

model on student university choice and generates various hypotheses. In the first section,

the proposed model is presented and discussed briefly. In the second section, the

hypotheses developed based on the literature review and the proposed model is presented.

Conceptual Model of the Study

When considering separately, neither economic nor sociological approaches are sufficient

for understanding differences across groups in student university choice. Manski (1993)

argues that economic approaches offer a framework for understanding decision making, but

are limited by their failure to examine the nature of information that is available to decision

makers. On the other hand, sociological approaches shed light on the ways in which

individuals gather information, but do not identify the ways in which individuals make

decisions based on this information (Manski, 1993). Recent research on student university

choice stresses the strengths of a conceptual models that draw upon constructs from both

economics and sociology (e.g. Hossler and Gallagher, 1987; Perna 2000; Paulsen, 2004). In

designing the model for this study and selecting the variables, basically three models of

university choice is taken into account: Hossler and Gallagher (1987), Chapman (1981),

and Hanson and Litten (1982). Therefore, the proposed model draws on an economic

model of human capital investment as well as the sociological concepts of social capital.

The conceptual framework used for this study reflects the complex, multi-faceted process that is involved in university choice. Figure 1 shows variables chosen for this study based on three choice models discussed. As this study focuses on the choice stage of the decision-making process, these models allow for inclusion of both student and institutional variables as potential influencers of students' decisions to choice of a particular university in this final stage of the university decision process.

In this model there are three primary categories of university choice decision variables. University characteristics comprise the first category, which includes the image, social environment of the university, location, and the financial factors related with universities such as affordability and financial aid provided by the university. The other primary category is made up of information sources. These information sources divided into two categories: communication efforts of the universities and significant persons. Additionally, a third category of variables, student characteristics which includes some demographic and personal characteristics such as gender, religiosity, student's academic performance, socio-economic status of the student will be treated separately in this model.

The model predicts that university characteristics, information sources and student characteristics are expected to determine student's attitudes toward a university, which in turn affects university choice.

The model of this study differs from those offered in previous studies in a number of ways. First, researchers have previously conceptualized "the campus visit" as one of the communication efforts of the university, all of which are potential influencers of university choice. However this model separates the influence of the campus visit from other communication efforts, since the campus visits are important for students, parents or counselors to get information about the institution. That is, students can use the campus

48

visits as an avenue to gain information on important attributes of universities. Therefore, in

the model the campus visit is considered as a moderator variable which would strengthen

the positive relationship between university characteristics, information sources and

student's attitude toward a particular university.

Most importantly, the model predicts university choice to be influenced by students'

affective responses (attitude toward university) that are also affected by university

characteristics, significant persons, communication efforts of a university, and student

characteristics which is also lacking in the current literature.

The following hypotheses are developed based on the literature review and the

proposed model.
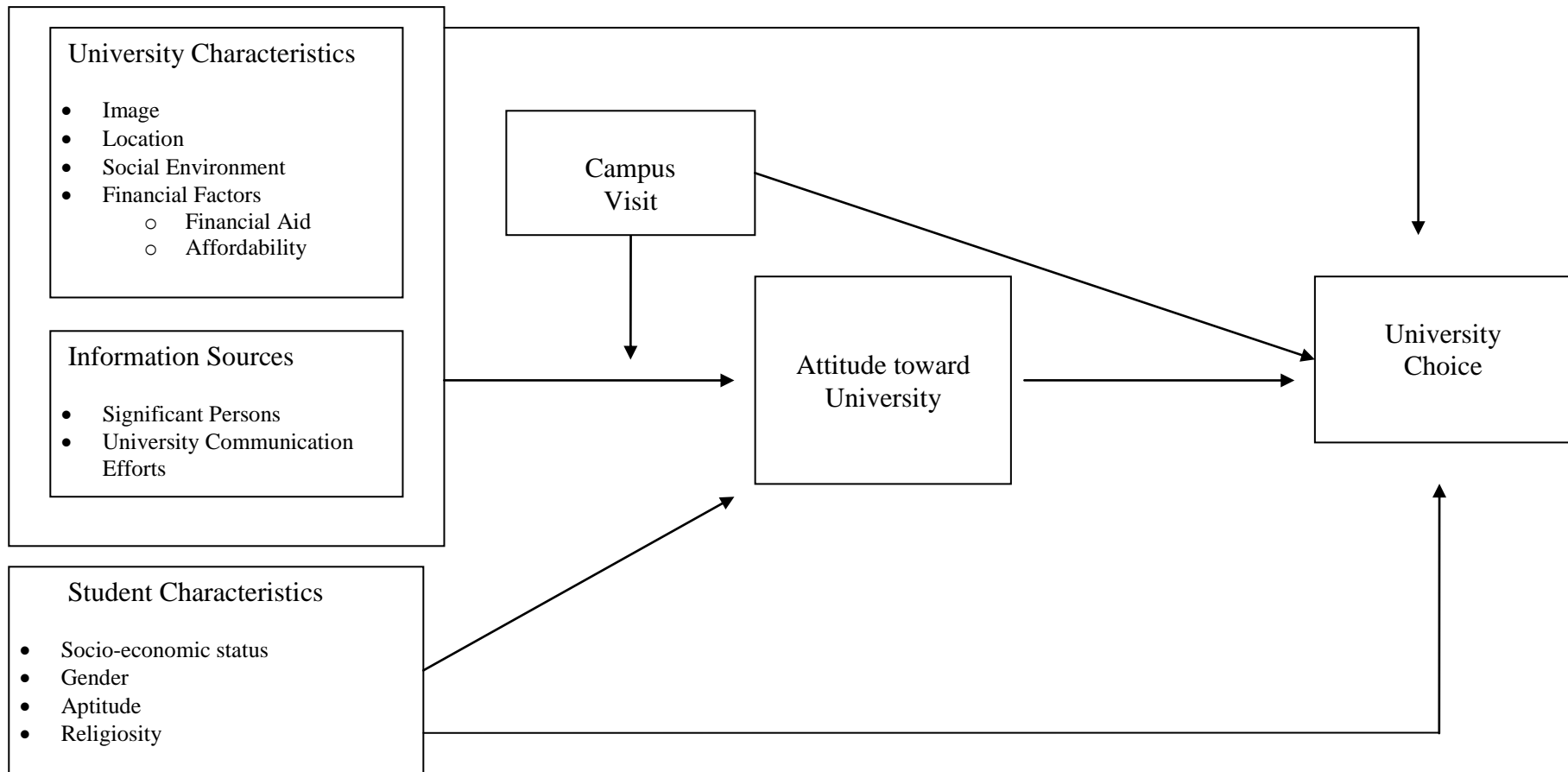
Figure 1. Conceptual Model of the Study

Hypotheses

University Characteristics

Numerous studies have attempted to provide explanations of how consumers search and

evaluate product brands through the perspective of information processing (Parameswaran

and Glowacka, 1995). Results suggested that, in general, most consumers use six or fewer

criteria (attributes) to evaluate products. In the case of university choice, studies continue

to demonstrate that image, location, social environment of the university and the financial

factors had the highest average importance ratings throughout the process of the student

university choice. Attitude-toward- object is a well-known measure that is used to predict

choice of a particular object, thus, in this study attitude toward university is used as the

dependent variable in developing hypotheses.

Image

A review of the university choice literature reveals that institutional image or prestige or

reputation has a tremendous effect on university choice. Several authors suggested that the

key factor affecting student choice of a university is the prestige of the university

(Chapman, 1979; Murphy, 1981; Litten et al., 1983; Discenza et al., 1985; Hossler, 1985,

Keally and Rockel, 1987; MacDermott et al., 1987;Chapman and Jackson, 1987, Sevier,

1986, 1994; Martin, 1996; James et al. 1999, Price et al., 2003). Krukowski (1985) found

that what a student wanted most was status, especially the status attached to a prestigious

institution. It was a university's perceived image that was important. He found that students

establish a hierarchy of institutions based on their sense of each university's relative prestige, a quality they believed translated most directly into the outcomes they want: success in a job market and professional school admission. Chapman (1993) conducted one of the most extensive studies of the university-choice process with a meta-analysis of the results of 80 university-choice surveys with more than 55,000 respondents. The findings were consistent with the previous research (Manski and Wise, 1983) indicating that overall academic reputation (e.g. quality of faculty, quality of majors) were the institutional attributes most important to university applicants. Hanson et al. (1998) also reported that most important positive factors for student's choice of the university are national academic reputation, the prestige of the university and quality of faculty. Furthermore, students are interested in outcomes, that is, they are influenced by what graduates are doing, what graduate schools they attend and contributions that they are making to society (Sevier, 1997). Since they are considering placement, and wanting to be well prepared to compete in the marketplace, career opportunities with employment enhancement (Krone et al., 1981, Paulsen, 1990; Gray, 1996; Sevier, 1998), good job replacement (Comm and Labay, 1996), job opportunities after graduation (Bruwer, 1996; Wajeeh and Micceri, 1997) are found as important factors influencing university choice. Taking all these into consideration, it is hypothesized that,

 H1: There is a positive relationship between students' favorable perceptions of the image of the university and attitude toward university.

The Social Environment

The university atmosphere or environment generally refers to social prestige (Jackson, 1986). In university choice literature campus setting, campus appearance or social environment of university is found as one of the positive factors for student's choice of the university (King, et al., 1986; Martin and Dixon, 1991; Galotti and Mark, 1994; Absher and Crawford, 1996; Moogan et al., 2001; Veloutsou et al., 2004). Campus activities such as cultural events and sporting games are useful for influencing students in the search and choice stages (Weiler, 1996; Dortch, 1997). In Litten's (1982) research, participation in campus clubs, and activities as well as outdoor programs and recreation, academic program options were significant influences for a prospective student. Mathews (2000) in examining the decision to attend a university found that activities are the strong factors. Maguire and Lay (1981) found athletic activities to be the important factor in choosing a university. Hanson, Norman and Williams (1998) found that factors that positively influence students' decision are quality of facilities, variety of majors, social climate of the campus and quality of social life. In the light of these findings, it is hypothesized that,

H2: There is a positive relationship between students' favorable perceptions of the university's social environment and attitude toward university.

Location

The distance from home of the students' choices is a major factor in whether they are able to implement these choices (Murphy, 1981; Maguire and Lay, 1981; Chapman, 1981; Hossler, 1985; Discenze et al., 1985; Welki and Navratil, 1987; Smith, 1990; Huneycutt,

Lewis and Wibker, 1990; Martin and Dixon, 1991, Roberts and Allen, 1997; Moogan et al.,

1999; Moogan et al., 2001; James et al., 1999; Veloutsou et al. 2004). Thus, regardless of

the student's sex, race, or family income, they are substantially more likely to enter the

university preferred if that university is located near rather than far from home. Maguire

and Lay (1981) in their study of the application pool at Boston College and found that

students who planned to attend a HEI near homes is more likely to do so. On the other

hand, Litten et al. (1983), Maguire and Lay (1981), as well as Muffo (1987) found that

distance from home is negatively related to likelihood of student's choice of a particular

university. Frisbee, Belcher and Sanders (2000) identified location, preferably close to

home as a critical variable in the university choice decision-making process. Miller (1986)

also found location (closeness to home) as a reason why students apply to a particular

university. Dembrwoski's (1980) study concurs with Chapman's (1981) findings that most

students choose a university located in their home state. Based on these studies university

closeness to home approach is used to indicate the location-based influence. Thus, it is

hypothesized that,

H3: There is a positive relationship between students' favorable perceptions of the

university closeness to home and attitude toward university.

Financial Factors

Several studies have been done that seek to compare and contrast financial factors (cost and

financial aid) used in the university selection (Litten, 1983: Hu and Hossler, 2000; Baksh

and Hoyt, 2001). The role of each financial factor in the choice stage of university choice

process will be examined separately below.

Affordability

Along with the substantial increase in tuition and subsidies, the concern about college affordability has motivated much of the research on the economic perspective of student persistence over three decades (St. John, 1994). Several studies showed that cost is one of the most important choice factors in the university choice process (Maguire and Lay, 1981; Litten and Brodigan, 1982; Litten et al., 1983; Hoxby and Long, 1999). Besides, much of the university choice research has indicated that university selection is inversely related to tuition (Kohn, Manski and Mundel, 1974; Chapman, 1979; Tierney, 1982; Ehrenberg and Sherman, 1984; Jackson, 1986; Chapman and Jackson, 1987; Seneca and Taussig, 1987; Moore, Studenmund and Slobko, 1991). Cabrera and La Nasa (2000) pointed a research which consistently showed a significant negative relationship tuition increases and enrollment. Similarly, Leslie and Brinkham (1988) in an examination twenty-five studies examining the relationship between tuition and university choice, found that all the students were sensitive to tuition cost. Since the affordability is the extent to which students are able to meet the costs of attending a higher education program it is expected that affordability of a university will be positively influenced the attitude toward university. Thus it is hypothesized that,

H4: There is a positive relationship between students' perceptions of the affordability of the university and attitude toward university.

55

Financial Aid

Student financial aid includes need-based grants, work-study, scholarships and free gifts

offered by the university. Research shows that an offer of financial aid is an important

predictor of university enrollment among high school graduates (Catsiapis, 1987),

university applicants (St.John, 1991), and high aptitude high school students (Avery and

Hoxby, 2004), regardless of the type of aid (Perna, 2006).

In university choice literature much has been said about the positive and significant

effect of financial aid on university choice (Discenza, 1985; Hossler, 1985; Rouse, 1994;

Hilmer, 1998). In a study of more than 2500 students, the effect of the receipt of any

financial aid on university choice was found to be positive (Somers and St. John, 1993).

Chapman and Jackson (1987) found that amount of financial aid increases the likelihood of

attending a particular university. Maguire and Lay (1981) also named financial aid as one

of the most important factors in choosing a university. Straus and Van De Water (1997)

analyzed data from hundreds of surveys of university-bound high school seniors to

determine the relative importance of institutional attributes as they relate to university

choice. They found the availability of financial aid to be among the university

characteristics most valued by students.

University selection is directly related to financial aid, especially grants and

scholarships (Chapman, 1979; Ehrenberg and Sherman, 1984; Chapman and Jackson,

1987; Moore, Studenmund and Slobko, 1991). The literature reviews by Leslie and

Brinkman (1988) and Heller (1997) also found that grants do increase the likelihood of

enrollment of students. This is also confirmed by longitudinal research of Dynarski (2004).

Fuller, Manski and Wise (1982) examined the determinants of the various choices that

students face and they disaggregated the costs of schooling by dividing into tuition, scholarships and living expenses drawing a policy implication that financial aid is an important determinant of postsecondary choice. With a similar line of reasoning, it is hypothesized that,

H5: There is a positive relationship between students' favorable perceptions of the financial aid provided by university and attitude toward university.

<center>Information Sources</center>

Sources of information play a major role in the process of university choice. Students are interested in the image of the institutions they are considering and university sources of information are an important material of portraying this image. Struckman-Johnson and Kinsley (1985) suggest that image beliefs about institutions are formed as individuals gain information about a university through media sources, interpersonal exchanges and direct experiences.

Galotti and Mark (1994) stated that students make use of different university information sources and that the use of these materials increase and become more important during the search and choice stages. Sources of information consist of specific blend of university's marketing communication mix which is stated in this study as university communication efforts and personal information sources which is stated as significant persons.

<center>57</center>

In a study conducted by Maguire and Lay (1981), university published materials such as the undergraduate catalog, brochures, audio compact disks, university guides were rated as very important sources of information by prospective students. Gray et al. (2003) investigated the media that students used to gain information about universities and concluded that the web site of the university and print media were perceived to be the most important sources of university information sources. Brown and Hoyt (2003) similarly found that web site as the most influential sources of information for prospective students, followed by the campus visit. A study by Williams (2000) indicated that the new marketing media and associated forms of communication technologies, such as the internet, world wide web (www), electronic mail, and chat rooms, are desired and are reliable ways for colleges and universities to offer instant access to needed information as students maneuver through the various phases of the recruitment and selection process.

Frisbee, Belcher and Sanders (2000) demonstrated that students influenced by university catalog in their choice of a university. Since several studies have suggested different communication tools more or less effective for controlling and sending different types of messages about the institutions to prospective students (King et al., 1986; Ingersoll and Klockentager, 1982; Litten and Brodigan, 1982), it is hypothesized that,

H6: There is a positive relationship between students' perceptions of the degree of university communication efforts and attitude toward university.

Significant Persons

Considerable research has been conducted on the impact of personal influences on university choice. These studies suggested that student's university choice is influenced by recommendations of their parents, friends, high school counselors, teachers and relatives (Chapman, 1981; Martin and Dixon, 1991; Galotti and Mark, 1994; Joseph and Joseph, 1998, Frisbie, Belcher, and Sanders, 2000).

Litten, Sullivan, and Brodigan (1983) illustrated that the development of student perceptions and preferences parallel to those of their parents. Tillery (1973) discovered that parents are considered by many students to be the most helpful consultants in the university choice process. It has been shown in various researches that recommendations from parents constitute a major source of influence on student's university choice (Chapman, 1981; Flint, 1992; Hossler and Stage, 1992; Greenlee and Rosen, 1995; Athiyaman, 2000; Cabrera and La Nasa, 2000, 2001; Somers, Cofer and Vanderputten, 2002). As most parents are involved in the university search and choice process to some degree and often are a source of significant source.

Another leading personal influence for potential students in their university choice process is their friends. Many studies showed that students are reluctant to choose a university that may elicit negative response by friends. For example a study by Adebayo (1995) determined that friends were one of the major information sources that affected a student's university choice. Sevier (1998) similarly found that the student university choice process is influenced a great deal by student peers. Maguire and Lay (1981), Discenza et al. (1985), Hossler (1985), Carpenter and Fleishman (1987), Hossler, Schmit, Vesper and

Bouse (1990) and many other researchers named peer influence as one of the most important factors in choosing a university.

Teachers are also influential players during a prospective student's university search and choice processes. Teachers, especially technology education or industrial arts teachers, who are alumni have a strong influence (Edmunds, 1980; Devier, 1982; Isbell and Lovedahl, 1989) on student's university choice. Many researcher in university choice literature (e.g. McDonough, 1997; Perna, 2000) identified teachers as one of the agents of social capital in university choice process.

Another significant person who has a strong impact on student's university choice process is high school counselors. Sanders (1986) found that high school counselors often identified factors that had been missed or not understood during a university search and choice processes. Boyer (1987) asserted that high school counselors should work in concert with high school students so that the process of student university choice would be more informed. Johnson et al. (1991) stated that approximately 70percent of surveyed students used their high school counselors as a source of information. In support of these studies Grossman (1991) found that advisors are the most influential reference group in helping students to determine university to choose. These findings also supported by other researcher (e.g. Tillery, 1973; Lewis and Morrison, 1975; Falsey and Heyns, 1984; Ekstrom, 1985).

Although there hasn't been much research focusing on the roles of relatives on university choice, many research emphasized the importance of family members to be personal source of information about the university choice process. Reinhardt (1938) found that among the 359 freshmen completing a survey on university decision-making, the most important factor in university choice was the influence of people, especially relatives. On

the other hand focus group results of this study revealed that relatives especially the ones who attended university are among the most influential people for student's university-choice. Based on these arguments, it is hypothesized that,

H7: There is a positive relationship between students' favorable perceptions of the significant persons (parents, friends, teachers, school counselors, relatives) and attitude toward university.

The Campus Visit

The results from several studies ranks the campus visit as the most critical source of information for the university choice decision (Jorgensen, 1994; Rosen et al., 1998; Armstrong, 2001). The campus visit is often seen as university's best recruiting tool. Numerous studies (Maguire, 1981; Dembrowski, 1980; Chapman and Jackson, 1987; Kellaris and Kellaris, 1988; Kealy and Rockel, 1987; Hossler et al., 1990) show a high correlation between the campus visits and student choice behavior. Since the campus visit, allows students to actually see and sense the campus appearance, school culture, and community environment around the university and have a positive influence on students' impressions of the institution in this study it is hypothesized that,

H8a: There is a positive relationship between students' favorable perceptions of the campus visit and attitude toward university.

and,

H8b: The relationship between university characteristics (image, social environment, location, affordability, financial aid) and attitude toward university will be moderated by

61

the campus visit in a positive way such that visiting the campus will increase the strength of the relationship between university characteristics and attitude toward university.

H8c: The relationship between university communication efforts and attitude toward university will be moderated by the campus visit in a positive way such that visiting the campus will increase the strength of the relationship between university communication efforts and attitude toward university.

H8d: The relationship between significant persons (parents, friends, teachers, counselors, relatives) and attitude toward university will be moderated by the campus visit in a positive way such that visiting the campus will increase the strength of the relationship between significant persons and attitude toward university.

Student Characteristics

There are no particular university attributes that are equally important to all students; importance of benefits varies from type to type of students. Thus, the interaction between student and institutional characteristics are especially important to understand. That is, in determining what students want from a university they choose to attend it could be important to identify what type of students universities are dealing with. Some of the university-choice literature devoted to the study of student characteristics as they relate to university choice (Chapman, 1981; Hauser, 1993; Kane, 1994; Rivkin, 1995; Averett and Burton, 1996; Tobias, 2002; Black and Sufi, 2002).

The research on the effects of gender on university choice is inconclusive and contradictory. The findings of many studies revealed that there was no statistically significant gender difference in predicting university choice (e.g. Elsworth et al., 1982; Carpenter and Fleischmann, 1987). On the other hand, Hanson and Litten (1982) found that women and men differed significantly in their university selection processes. The differences were primarily influenced by educational aspirations and were attributed to disparities in self-esteem or self assessment (Kinzie et al., 2004).

In accordance with this, some studies revealed that the students could be segmented into distinct markets based on benefits sought and their perception of the institution (e.g. Stage and Hossler, 1989). Radner and Miller (1975) and Astin, Harway and McNamara (1976) found that females had a preference for less prestigious universities. Ramist (1981) concurred that men were more likely than women to follow through with application to a more prestigious post secondary institution. Hearn (1984) also found a statistically significant negative relationship between being female and the reputation of the university that the student chosen. Light and Strayer (2002) study demonstrate a positive relationship between being male and the selectivity of the university attended. In accordance with these findings, it is hypothesized that,

H9a: Male and female students differ regarding their attitudes toward university.

and,

H9b: Gender moderates the effects of perceived image on attitude toward university such that male students' image perceptions will exert stronger positive effects on attitude for than female students.

Besides, Joseph and Joseph (1998) found that male potential students give more importance to social life available on campus than their female counterparts. In a similar way, Broekmeier and Seshadri (1999) surveyed 395 students in ten high schools in Midwestern state and found that male high-school students were more concerned with social life of the university than their female counterparts. Accordingly, it is hypothesized that,

H9c: Gender moderates the effects of perceived social environment on attitude toward university such that male students' social environment perceptions will exert stronger positive effects on attitude for than female students.

Socioeconomic Status (SES)

In this study the SES of a student comprise parental education and income level of a student. Therefore, studies used these variables separately or jointly as an evidence to develop hypotheses on that factor. Besides, family income and the education level of the student's parents generally shows similar patterns of relationship to choice outcomes.

Several studies showed that students with highly educated parents prefer to attend more prestigious than students with poorer and less educated parents (e.g. Spies, 1978; Zemsky and Oedel, 1983; Tierney, 1983). For example, Hearn (1984) found a positive relationship between parental education and preference for selective institutions. Similarly, Hossler et al. (1989) found that as the level of parental education increases, students are more likely to choose more selective universities. Choy and Ottinger (1998) also concluded that students whose parents had attained advanced degrees were more likely than students

64

with parents who attained only high-school diploma to cite reputation of the university as their prime university-choice criterion.

Many studies also revealed a significant relationship between parental income and selectivity of the university (e.g. Tierney, 1983; Zemsky and Oedel, 1983; Hearn, 1984; Hearn, 1991). For example, Jackson (1978) examined the effect of parents' income on university selectivity and results of this study showed that the net effect of parents' income on the selectivity of the university preferred was positive and significant. Chapman (1979) concluded that high SES students are more interested in academic quality than low SES students. Paulsen (1990) stated that students from low and middle income groups are less likely to attend more prestigious institutions as compared with high-income students. In accordance with these findings, it is hypothesized that,

H10a: High SES students and low SES students differ regarding their attitudes toward university

and,

H10b: SES moderates the effects of perceived image on attitude toward university such that high SES students' image perceptions will exert stronger positive effects on attitude for than low SES students.

Various studies suggested that increases in net price (tuition minus subsides like grants and scholarships) have driven low-income students away from the expensive universities and pushed them towards relatively inexpensive universities (e.g. Leslie and Brinkman, 1987; Paulsen, 1990; McPherson and Schapiro, 1997; Kane, 1994; Campaigne and Hossler, 1998). Chapman (1979) found that students prefer to attend academically prestigious institutions, but that price and availability of financial aid are definite influencers on university choice especially among students from low-income families. In a

similar way, Delaney's (1998) study showed that students from families in lower income category expressed significantly greater concern about cost of attendance compared with those in high income category. Likewise, Bishop (1977) showed that students from a lower SES are more likely to respond to the differences in net cost among institutions than are students from higher SES. Given the SES, financial aid also plays a significant role in university choice. For instance, Leslie and Brinkman (1988) reported that low-income students were more responsive to changes in grant amounts and tuition charges than high-income students. Cabrera and La Nasa (2000) also found that in their university choice families of lower SES were more likely to rely on financial aid than higher SES families. Black and Sufi (2002) stated that scholarship offers are less important to high income students as compared to low-income students.

Student's choice of a public or private university is also related with her/his SES. Especially in Turkey, the major source of income of state universities is the funds allocated through the annual State budget and student contributions to state universities form only 4percent of the total university budget. Meanwhile, the student fees in private universities are much higher and form most of the total university budget. For that reason it is expected that low-income students will be more responsive to the cost of the university than high-income students accordingly will prefer public universities over private universities. With a similar line of reasoning Davis and Van Dusen (1975) found that upper-income students preferred private institutions and lower-income students preferred public universities. In accordance with that Litten, Sullivan and Bordigan (1983) found a positive association between levels of parental education and preference for private universities. Ganderton (1992) studied the relationship between parent's income and decision to enroll in public university versus private university for a sample of students, and

results showed that there was a negative relationship between the student's SES (composite of parent's income and education) and her/his probability of attending a public university. In the light of these evidence, it is hypothesized that,

H10c: SES moderates the effects of perceived affordability on attitude toward university such that low SES students' affordability perceptions will exert stronger positive effects on attitude for than high SES students.

and,

H10d: SES moderates the effects of perceived financial aid provided by university on attitude toward university such that low SES students' financial aid perceptions will exert stronger positive effects on attitude for than high SES students.

Parental income is also associated with the distance from home to university (Flint, 1992). Students from low income families are most likely to attend university close to home (Astin et al., 1980). Zemsky and Oedel (1983) found that students with higher SES appear to focus on more out-of-state institutions. Based on these observations, it is hypothesized that,

H10e: SES moderates the effects of perceived location of the university on attitude toward university such that low SES students' location perceptions will exert stronger positive effects on attitude for than high SES students.

In sum, in this study it is hypothesized that as students' SES (parental income and education level) increase, students are more likely to choose high cost, high prestigious, distant and private universities.

Aptitude

Several studies have documented a relationship between student's ability and the university choice process. Researchers including Litten (1980), Seneca and Taussig (1987) and Tierney (1983) have found that academically talented students are looking for different attributes when compared with average students.

Many studies revealed that high school GPA is positively and significantly related to selectivity of the university attended (e.g. Jackson, 1978; Maguire and Lay, 1981; Tierney, 1983; Chapman and Jackson, 1987; Hearn, 1991; Savoca, 1990; Choy and Ottinger, 1998; Light and Strayer, 2002). Wanat and Bowles (1992) examine the process of university choice for academically talented students and found that academic reputation was one of the most important factors in their choice. Fink (1997) found that high ability students identified the following as very important in their university choice: overall reputation of university, success of graduates in finding good jobs and gaining admission to best graduate schools. Hearn (1984) and Chapman and Jackson (1984) also found that students with high academic ability were more likely to enroll in prestigious post secondary institutions. Taking all these studies into consideration, it is hypothesized that,

H11a: High aptitude students and low aptitude students differ regarding their attitudes toward university

and,

H11b: Aptitude moderates the effects of perceived image of the university on attitude toward university such that high aptitude students' image perceptions will exert stronger positive effects on attitude for than high low aptitude students

Studies also suggest that as student's academic ability increases they tend to consider institutions farther from home (e.g. Maguire and Lay, 1981; Hearn, 1984; Hossler and Stage, 1992). Dahl (1982) and Paulsen (1990) reports that academically gifted students are more likely attend highly selective and out-of-state institutions. Zemsky and Oedel (1983) found that student ability was directly related to the location of the HEI to which students applied. With a similar line of reasoning, it is hypothesized that,

H11c: Aptitude moderates the effects of perceived location of the university on attitude toward university such that low aptitude students' location perceptions will exert stronger positive effects on attitude for than high aptitude students.

The effect of financial factors on high ability students' university choice has also been studied. For example, Hearn (1984) found that, the effect academic ability was significantly related to the amount of tuition and fees at the university attended. Jackson also found that grades of students were significantly related to the cost of the university attended. Savoca (1990) found that a student's grades were positively related to the annual cost of attendance at his or her first-choice university. Brown and Hoyt (2003) found that high-ability students rate the cost of university as less important as contrasted with low-ability students. With a similar line of reasoning Ganderton (1992) found that high academic ability increases the probability that a student will choose to attend a private university. Thus, it can be reasoned that the student responsiveness to university cost decreases as academic ability rise; and vice, and it is hypothesized that,

H11d: Aptitude moderates the effects of perceived affordability on attitude toward university such that low aptitude students' affordability perceptions will exert stronger positive effects on attitude for than high aptitude students.

and,

H11e: Aptitude moderates the effects of perceived financial aid provided by university on attitude toward university such that low aptitude students' financial aid perceptions will exert stronger positive effects on attitude for than high aptitude students.

Religiosity

Few of the empirical and theoretical studies on university choice have directly taken into account the effects of religion and religiosity. Moreover most of them focus on the effects of religion and religiosity on participation in a religious school. For example Greeley and Rossi (1966) and Sander (2005) show that Catholic religiosity affects Catholic school enrollment. Non-Catholic religious effects and the effects of religiosity have usually not been considered. Cohen-Zada and Sandel (2008) found that both religion and religiosity have important effects on the demand for private, Catholic, Protestant, and non-sectarian schools. More specifically, church attendance has a large effect on the probability of attending a Catholic school. Schwarzwald and Leslau (1992) examined considerations underlying parents' choices of religious vs. secular higher education institutes for their children. They found that choice of university was related primarily to parental religiosity. With a similar line of reasoning, it is hypothesized that,

H12: There is a significant relationship between religiosity and attitude toward university.

Models of attitude formation have been proposed and used in the fields of economics, psychology, social psychology, and marketing. The most basic models in the field of marketing have been those identified as the Fishbein (1967), Rosenberg (1956), and the Importance/Adequacy model (Lutz and Bettman, 1977). The intent of these models is to measure a consumer's attitude toward objects in the marketplace and to determine the specific attributes associated with those objects. These models are thus called multiattribute models. There are number of articles which deal with the prediction of consumer preference or choice through the use of multiattribute models.

Arguably, the most well-known theory that assesses the relationship between attitudes and behavior is the Fishbein and Ajzen (1975) Theory of Reasoned Action (TRA). Theory posits behavior as a function of attitude, which reflects a combination of evaluative judgments and feelings toward performing a particular behavior. In other words, if people evaluate the suggested behavior as positive (attitude) and if they think their significant others want them to perform the behavior (subjective norm), this results in a higher intention (motivation) to perform that behavior and they are more likely to do so. In short, the basic of the theory is that behavior is affected by behavioral intent which, in turn, is affected by attitude and the subjective norm influences. These three variables mediate all external influences such as demographic variables, attitudes toward the target behavior. Based in part on the Fishbein and Ajzen's (1975) theory this study attempted to explain student's choice of a particular university as a function of beliefs regarding attitude towards university and it is hypothesized that:

H13: Attitudinal responses toward university are positively associated with the preference

for a particular university

   In this chapter of the study, conceptual model of the study is proposed and the generated hypotheses are discussed briefly, referring to the important studies from the literature as they apply to each hypothesis. In the next chapter, the major aspects of the research design and methodology utilized in the study are delineated.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

This chapter reintroduces the purpose of the study and outlines the methods employed. The chapter accomplishes four main objectives: 1) The research objectives and research design employed were overviewed. 2) Focus group interviews and pretest were conducted for the selection of stimuli and generation, operationalization and purification of items were discussed. 3) Issues related to questionnaire design and administrations were detailed. 4) The sampling and data analysis methods used were discussed.

Research Objectives

The purpose of this study is to investigate factors attributing to the university choice of Turkish prospective students. The study focused on the university characteristics, information sources as indicators of final university choice. The study further sought to compare differences between the student's ascribed (i.e. gender, religiosity), socioeconomic (i.e. parent's education, and parent's income), and academic background (i.e. high school GPA/ Aptitude) characteristics toward the choice of a particular university. This study was also undertaken to examine the role of the campus visit as a moderator variable on the relationship between university characteristics, information sources and prospective students' university choice.

In addition, attitude toward university was modeled on the basis of student's perceptions used to predict student's choice of a particular university. In what ways the

antecedents may influence the attitudinal responses had been subject of inquiry as well. The following research questions were developed to guide the study:

- What are the potential determinants of students' university choice behavior?

- Do university characteristics (image, social environment, location, affordability, financial aid provided by university), information sources (significant persons, and university communication efforts) have a direct impact on prospective students' university choice?

- Do prospective students' characteristics (socioeconomic status, aptitude, gender, and religiosity) have a direct impact on prospective students' university choice?

- How does the campus visit moderate the relationship between university characteristics, and prospective students' attitude toward university?

- How does the campus visit moderate the relationship between information sources (significant persons and university communication efforts) and attitude toward university?

- How does the attitude toward university mediate the relationship between university characteristics and prospective students' university choice?

- How does the attitude toward university mediate the relationship between information sources (significant persons and university communication efforts) and prospective students' university choice?

- How does the attitude toward university mediate the relationship between student characteristics and prospective students' university choice?

Selection of Stimuli

In order to identify the relevant universities to be used in the survey three focus group interviews and rankings provided by the YOK, 2008 were used.

Three focus group interviews were conducted following Greenbaum's (1998) guidelines. Nineteen prospective students from the classes of two exam preparation establishments (Yildiz Dershanesi, Besiktas / Final Dershanesi, Gaziosmanpasa) and class of a high school (Kadırga Endustri Meslek Lisesi) in Istanbul were participated in the focus group interviews. Two main questions were discussed in the interviews; one of them was related to universities to be selected the other one was related to factors affecting university choice decisions of students. The question used for the selection of the universities was as follows:

- What are the first five universities you would like to attend (suppose that you've the score you wish)

While choosing among various university alternatives, several constraints were considered. First, one has to ensure that the respondents of the main study will be familiar with the universities chosen. For that reason other than focus group results, rankings of universities provided by The Council of Higher Education (Yuksek Ogretim Kurumu/ YOK) was taken into consideration. Second, in order to precisely measure the effect of location on university choice, universities only in Istanbul were included in the study. Due to these restrictions, several universities were eliminated.

At the end of the selection process, five universities- namely, Bogazici University, Istanbul Technical University (ITU), Sabanci University, Koc University, and Fatih University were chosen for the study.

Qualitative Study

None of the research reported in the extant literature on university choice assesses the student choice of a university through a valid and reliable scale. Determining the dimensions of the university preference and their items was thus one of the purposes of this research.

Focus group interviews and the following pretests were used to generate, operationalize and purify the items of the study. As suggested by Morgan (1997), three focus group interviews were conducted, each lasted 40 minutes. The domain of the construct was specified to the students at the start of the focus group interviews, as recommended by Churchill (1979). The focus group interviews were semi-structured. That means, the moderator had general guidelines with regard to what questions to ask, but was free to respond to and build upon respondents' answers. Students were asked about their ideas of possible factors that would affect their choice of a particular university as follows:

Please indicate the factors affecting your choice of a university.

A content analysis was conducted to analyze the findings of the focus group interviews. First, the themes generated from the responses of fifteen students were written down and frequencies of each theme in the relevant category were generated. These themes were then categorized. After this, a sorter, a PhD candidate in Management at Bogaziçi University, independently categorized themes. Then the lists of researcher and the sorter were compared and it was seen that 36 themes out of 39 were matched. According to the formula

R = (N*Average Agreement) / [1+(N-1)*Average Agreement] by Holsti (1969), interjudge reliability was found 0.97 is greater than 85percent which is the minimum acceptable percentage for reliability.

The results of focus group interviews not only supported the dimensions and their related items in the literature but also provided additional elements for these dimensions. For example two items of financial aid (part-time job opportunities and free gifts offered by the university) which were left aside in the empirical studies frequently was brought up during the discussions. Especially the free gifts offered by the university were mentioned over and over again. This is probably due to the fact that Turkish private universities often use free gifts to attract students. Moreover, though not cited in empirical studies, a new image item which is foreign-language medium was revealed by the focus group interviews. Similarly, this is probably due to the fact especially recognized in Turkey that the universities or even majors that have foreign language medium instruction are perceived as more prestigious than mother tongue instruction. Finally, the effect of authorities of university attending programs on TV was also revealed in focus group interviews. This was not surprising considering the university authorities' appearing in the several TV programs increasingly lately.

Operationalization of the Variables

In the literature, unidimensional single-item scales are criticized for their low reliability and inability to capture the latent constructs (Churchill, 1979). Thus, in this study multi-item scales were used to measure the variables under study.

The variables in the proposed model were measured using self-report measures of the respondents. The respondents were asked to indicate either the extent to which they agree or disagree with each statement or their position on semantic differential scales for each statement. All the variables were measured through six-point Likert scales or semantic differential scales, except for the demographics. The use of an even point scale was preferred to eliminate bias toward neutral opinions.

Most of the items used closely coincide with those used in previous studies in order to build upon prior research and to avoid unnecessary redundancy (Netemeyer, Bearden, and Sharma, 2003). Some of the items were revealed by the focus groups interviews. For the new items that arose from the focus group interviews new measures were constructed. Multiple items adopted from The Admitted Student Questionnaire (ASQ, 2006) and Cooperative Institutional Research Program Freshmen Survey (CIRP, 2009), Student Satisfaction Inventory (SSI) were used to compile the measurement instrument for this study. The ASQ admitted students to tell institutions what they really think of their programmes, financial aid packages, competition, institution's image and characteristics. The ASQ consists of 92 questions and is very popular internationally, as it enables institutions to find out what students think about their specific higher education institution in general as well as about specific aspects of the university experience both academically and recreational. CIRP is a national longitudinal study of the American higher education system. It is the largest and oldest empirical study of higher education involving 1800 institutions and over 11 million students. CIRP contains 40 questions, covers a broad array of issues and themes such as demographics, high school experiences, reasons for attending a specific university, university finances. SSI is an established survey developed by Noel-Levitz Inc. The SSI survey consists of twelve composite scales (Levitz, 1997) about the

specific attributes of the institution and students' satisfaction with the institution, and each

scale is comprised of several items. Some of the questions in ASQ, SSI, and CIRP related

with university characteristics and sources of information were not used due to limited

relevance for this study.

The importance of the institutional and informational characteristics in the ASQ and

CIRP was measured with 3-point Likert scale (1= Very important 2= somewhat important

3= Not important). In order to provide a higher level of intensity, all of the university and

information sources characteristics adopted from these two measures were measured with

6-point Likert scales. Although none of the mentioned sources use a particular university

name, this questionnaire specified five selected universities separately in the statements

given below. This section covers the multi-item measures for university characteristics

(image, social environment, location, affordability, financial aid) and information sources

(university communication efforts and significant persons) and the statements utilized for

each of them and the respective sources they are based.

Image

The image of the university was measured by asking prospective students to indicate how

favorable they perceive the image of the university. Items used in the study of Ivy (2001),

CIRP (2009) and items emerged after focus group interviews were used to measure the

image of the university. Prospective students were asked to assess the perceived image of

the university on a six-point Likert scale with the end points 1="strongly disagree" and

6="strongly agree".

Table 1. Operationalization of Image of University

Statement:	Source:
The [University name] ' s faculty has a good reputation within the community	Ivy, 2001
The [University name] has a foreign language-medium instruction	Focus Groups
Graduates of the [University name] gain admission into top graduate schools	CIRP, 2009
The [University name] has high rankings in OSYM booklet	CIRP, 2009
The [University name] has international exchange programs with numerous universities	Ivy, 2001
Graduates of the [University name] get good job opportunities	CIRP, 2009
The[University name] has close links with industry	Ivy, 2001

Social Environment

The social environment of the university was measured by asking prospective students to indicate how favorable they perceive the social environment of the university. Items used in the study of Joseph, Yokhou and Stone (2005), Ivy (2001), and ASQ (2006) were used to constitute the university social life scale. Prospective students were asked to evaluate the social environment of the university on a six-point Likert scale with the end points 1="strongly disagree" and 6="strongly agree".

Table 2. Operationalization of Social Environment of University

Statement:	Source:
The [University name] offers various student activities outside the class (music festivals, film demonstrations etc.)	Joseph et al., 2005
The [University name] provides opportunities to participate in a variety of sports	ASQ, 2006
The campus of the [University name] attracts me a lot	Joseph et al., 2005
The [University name] has a wide range of majors	Joseph et al., 2005
The [University name] has variety of student clubs	Joseph et al., 2005
The [University name] has attractive open days	Ivy, 2001

Location

The location of the university was measured by asking prospective students to indicate how favorable they perceive the location of the university. In order to measure location of the university items in ASQ (2006) were used. Prospective students were asked to evaluate the perceived location of university on a six-point Likert scale with the end points 11="strongly disagree" and 6="strongly agree".

Table 3. Operationalization of Location of University

Statement:	Source:
It is easy to get into the [University name] from my home	ASQ, 2006
Part of the city in which the [University name] located is very convenient	ASQ, 2006

Affordability

Previous studies showed that university's support on housing, travel, and food expenses

and convenient ways provided by university for paying fees are all influential on students'

university choice related behaviors (e.g., Paulsen and John ;1997, Joseph et al.,2005).

Prospective students' perceptions regarding affordability of the university were assessed

by items adopted from Paulsen and John (1997), Joseph et al. (2005), CIRP (2009), and

SSI and measured with a six-point Likert scale with the end points 1="strongly disagree"

and 6="strongly agree".

Table 4. Operationalization of Affordability of University

Statement:	Source:
The [University name] helps housing expenses	Paulsen and John, 1997
The [University name] provides convenient ways of paying school fees	SSI
The [University name] provides internship opportunities	Joseph et al., 2005
The [University name] helps food expenses	Paulsen and John, 1997
I can afford the tuition fees of the [University name]	CIRP, 2009
The [University name] helps travel expenses	Paulsen and John, 1997

Financial Aid

Financial aid provided by the university was measured by asking prospective students to

indicate how favorable they perceive the financial aid provided by the university. Items

used in the study of Ivy (2001), and items emerged after focus group interviews were

used to constitute the financial aid scale and measured with a six-point Likert scale with the end points 1="strongly disagree" and 6="strongly agree".

Table 5. Operationalization of Financial Aids provided by University

Statement:	Source:
The [University name] provides various scholarship opportunities	Ivy, 2001
The [University name] provides free gifts such as Laptops etc.	Focus Groups
The [University name] provides grant opportunities	Ivy, 2001
The [University name] provides part-time job opportunities	Focus Groups

University Communication Efforts

University communication efforts were measured by asking prospective students to indicate how favorable they perceive the communication efforts of the university. Items used in the studies of Chung, Fam, and Holdsworth, (2009), Shank and Beasley (1998), Ivy (2001), and CIRP, SSI and an item revealed in focus group interviews were used to constitute the university communication efforts scale. Prospective students were asked to evaluate the communication efforts of university on a six-point Likert scale with the end points 1="strongly disagree" and 6="strongly agree".

Table 6. Operationalization of Communication Efforts of University

Statement:	Source:
The [University name] sending informative CDs and Brochures	SSI
[University name] has several ads on TV	CIRP, 2009
[University name] has several ads in newspapers/magazines/billboards	CIRP, 2009
The [University name] attending education fairs	Chung, Fam, and Holdsworth, 2009
The [University name] sending informative catalogs	Shank and Beasley, 1998
The [University name] has a informative web site	ASQ
The authorities of the [University name] attending several programs on TV	Focus Groups

Significant Persons

The role of significant persons on prospective students' university choice was measured by asking prospective students to indicate how favorable they perceive the advices from significant persons. In order to measure the role of significant persons items in the studies of Joseph et al., (2005), Reinhardt (1938), and CIRP (2009) were used and measured with a six-point Likert scale with the end points 1="strongly disagree" and 6="strongly agree".

Table 7. Operationalization of Significant Persons

Statement:	Source:
My friends advice me to go the [University name]	Joseph et al., 2005
My parents advice me to go the [University name]	CIRP, 2009
My relatives who are graduates or current students of the [University name] advice me to go the [University name]	Reinhardt, 1938
My exam training center counselor advice me to go the [University name]	CIRP, 2009
My teachers advice me to go the [University name]	Shank and Beasley, 1998

The Campus Visit

To address possible effects of the campus visit on university preference, participants were asked about if they have visited the campus of the university or not.

Student Characteristics

Student characteristics including socioeconomic status, aptitude, gender, and religiosity were measured either categorically or continuously. Gender was measured using nominal scale. Student aptitude level was measured on the basis of their GPA scores. In Turkey for different schools there are different systems to calculate GPA. However, since the weighted GPA is generally base on the scale of 5.0, first, all the other scores were converted to 5.0. Then, students were divided into two groups of high (3 and up) and low (2-2.99) scores.

Social class often measured in terms of social status which is the amount of status that the members of that class have in comparison with members of other social classes. Systematic approaches for measuring social class fall into three broad categories: subjective measures, reputational measures, and objective measures of social class. In this study objective measures were used to assess the social class of students under study. Objective measures consist of selected socioeconomic variables concerning the individual. When selecting objective measures of social class, most researchers favor one or more of the following variables: occupation, amount of income, and education. In this study, student's family income and education level were used as a means of locating the specific social class membership of each student (Schifman and Kanuk, 2007). The constructed student's socio-economic score was included as a continuous independent variable in a regression model.

Religiosity measures were adopted from Religious Orientation Scale developed by Allport and Ross (1967) which is proved to be a reliable measure of religiosity (Donahue, 1985). Original scale is composed of twenty statements which are scored on a scale of 1 to 5. In this study only three statements were used to measure religiosity in order to provide simplicity. Further, students rated the degree of their own religiosity on a 6 point Likert scale (1= strongly disagree 6= strongly agree) in order to provide coherence throughout the questionnaire.

Attitude toward University

The literature supports the use of a semantic differential scale for the attitude measure (Bagozzi and Burnkrant, 1979; Osgood, Suci, and Tannenbaum, 1957; Yang, Blunt, and

Butler, 1994). In this study, participants used a six-point bipolar scale to rate the evaluative adjective pairs: good-bad, like-unlike, superior-inferior, and appealing-unappealing. The sum of all four items comprised the attitude toward university score.

University Choice

To measure their university choice, prospective students used a six-point scale ranging from 1 (not preferred at all) to 6 (definitely would prefer). In using this scale, students assumed that they want to go to this university and then judged whether it would be this particular university.

Pretest for Scale Purification

Before pretesting, panel of expert judges were asked to judge the face validity of items in each pool, as recommended in the literature (DeVellis, 2003). These judges consist of two professors of marketing who have expertise in consumer behavior and experience in scale development and a doctoral student in marketing. Each judge was asked to comment on the representativeness of each 39 item. During these discussions, it was frequently mentioned that several measures contain items that were quite redundant due to the difficulty of assimilating these items to the Turkish university system. In these circumstances, two of the items were eliminated (political orientation of the university and availability of sport scholarships). The listing of the initial item pools in Appendix A indicates which items were retained and which were eliminated at this step.

Before conducting pretest in order to refine the scale, the items were translated to Turkish through the use of back translation process. First the items were translated into Turkish by the researcher. They were then back translated into English by a master student in foreign language department. Differences between them were then analyzed and some necessary modifications were made to improve the overall clarity of the items.

For further refinement of the scale, pretest was conducted. In the pre-test procedure, thirty prospect students studying in several exam preparation centers were requested to read the questionnaire, respond to the statements, and comment on any ambiguous or unclear statements. Some minor wording modifications were made to improve the overall clarity of the instructions and questions set as a result of this process. Besides, pretest results were used to determine appropriate survey length (about 15 minutes per university).

After these slight modifications, reliability tests were conducted to determine the degree to which scales are free from error and internally consistent. Churchill and Iacobucci (2010) suggest that if the construct has more than one dimension, coefficient alpha needs to be calculated for each dimension. Therefore, reliability tests for each scale were conducted by computing Cronbach's Alphas. Since the alpha levels above .50 are typically considered acceptable (Netemeyer, Bearden, and Sharma, 2003) all the 37 items used in pretest were kept for the main study.

Sequencing of Questions in Questionnaire

The questionnaire was divided into four parts. In the first part of the questionnaire students were asked to evaluate the importance of university characteristics (image,

88

social environment, location, affordability, and financial aid), information sources (communication efforts, significant persons) in their university choice decision.

In the second part of the questionnaire students were asked about their perceptions towards universities (Bogazici University, ITU, Sabanci University, Koc University, and Fatih University) in terms of university characteristics (image, social environment, location, affordability, financial aids) and information sources (communication efforts of the university and advices from significant persons) supposing that they got the sufficient exam score for each of these universities. At the end of this section students were also asked if they have visited the campus of each of these universities. In the third part of the questionnaire students answer questions assessing their attitudes toward university and preference about each university.

Finally, fourth part of the questionnaire dealt with the demographic, societal and academic background of each prospective student. Especially questions related with religiosity were positioned towards the end of the questionnaire due to its sensitive nature as recommended by Brace (2008).

Questionnaire Administration and Data Collection

The data collection stage of this study was funded by Bogazici University Research Fund. The questionnaires were administered by a professional research company to prospective students living in Istanbul and who took the SSE by means of face-to-face interviews. The students were contacted in person at their homes or exam preparation centers. The interviewers were highly experienced and they were received an orientation about the purpose of the survey and the contents of the questionnaire in detailed training sessions

before going into the field. They obtained respondents' names and telephone numbers for validation purposes. Approximately 5 percent of the respondents were randomly contacted to confirm that the interviews are completed as planned.

The questionnaires were accompanied by a short cover letter stating that the questionnaire is in conjunction with a study being conducted at the Department of Management of Bogazici University and all information provided will be used for academic purposes only and be treated confidentially. The general instructions were given at the beginning of the questionnaire and were repeated verbally when required throughout the questionnaire.

In Turkey, while taking the SSE students dividing into two parts, namely verbal and quantitative, in terms of tests they took in the SSE. That is, students are making their choices about higher education programs and accordingly universities based on these broad areas. In order to control the differences between universities due to this distinction two separate versions of questionnaire were prepared for each group of students.

The completion of each questionnaire lasted between 30-40 minutes and once the responses to all questions were completed, the respondents were thanked for their participation. The questionnaires were administrated to students after the Student Selection Exam and were collected approximately over five weeks.

Sampling

A major assumption underlying this particular study is that much of the decision making concerning what university to attend occurs during the last year of high school. The data

90

used for the study thus covers the students who finished their secondary education and took the student selection exam of 2009. As the students who took the exam before and attended a university could have faced a more distinctive university selection process than other students, they were excluded from the study.

Furthermore, as noted above, in order to measure the effect of location on student's choice of a particular university, this study limited to representative sample of students from Istanbul, Turkey. These restrictions resulted in a fairly homogenous population of students, the majority of whom were taking the SSE for the very first time.

The sample size used in multiple regression is perhaps the most influential single element under the control of the researcher in designing the analysis. The effects of sample size are seen most directly in the statistical power of the significance testing and the generalizability of the result (Hair et al., 1998). There are many different opinions as to the minimum sample size one should use in multiple regression analysis. While some authors have suggested that 15 subjects per predictor are sufficient (Park and Dudycha, 1974; Pedhazur, 1997), others have suggested minimum total sample (e.g., 400, see Pedhazur, 1997), others have suggested a minimum of 40 subjects per predictor (Cohen and Cohen, 1983; Tabachnick and Fidell, 1996). Of course, as the goal is a stable regression equation that is representative of the population regression equation, more is better. If one has good estimates of effect sizes, a power analysis might give a good estimate of the sample size. In this study, there are twelve predictors. Based on the number of predictors (12), a sample size of four hundred students was considered appropriate for this study.

With the assistance of the research company, 508 prospective students in the districts of Istanbul were selected. Getting a complete list of all prospective students

who attended to SSE 2009 in each of the districts of Istanbul was not possible during the data collection period. Thus, cluster sampling method based on the districts of Istanbul was employed. First, a sampling frame listing all the 39 districts in Istanbul was identified. Then, a two-stage cluster sampling was employed. In the first stage 28 districts out of 39 were selected based on their student populations (number of exam preparation centers). That means, while selecting these districts the gravity for the prospective student movement within these districts was concerned. In the second stage prospective students from these 28 districts were selected proportionally based on number of exam preparation centers. Each respondent was asked to participate voluntarily, without receiving any compensation. Nevertheless, of the 508 students contacted, 432 agreed to participate in the study, yielding a response rate of 85 percent. Among the 432 completed responses, 215 were from verbal group, and 217 were from quantitative group.

Data Analysis Method: Moderated Multiple Regression

While earlier reviews of prior research (Hossler, et al., 1989; Paulsen, 1990) show that examinations of student university choice are dominated by quantitative methods, a review of research published since 1990 demonstrates the growing contribution of qualitative approaches. Both approaches are critical to the development of knowledge on student university choice. Quantitative methodologies are especially useful for testing and confirming theoretical propositions about university choice for a particular population. On the other hand, qualitative methodologies are critical for developing theoretical understandings of student-university-choice processes and for understanding

92

the ways in which university-choice processes play out for individual students (Gall, Borg, and Gall, 1996).

Qualitative approaches to student university choice utilize such methods as group interviews (e.g., Freeman, 1997), case studies (e.g., McDonough, 1997), and life history (e.g., Gonzalez, Stone, and Jovel, 2003). Quantitative approaches to student university choice typically utilize multivariate analyses to isolate the relationship between key independent variable(s) and the outcome of interest after controlling for other variables. Because many university-related outcomes are dichotomous (e.g., aspire to university, yes or no; apply to university, yes or no; enroll in university, yes or no), logistic regression is common in quantitative analyses of university choice. Other quantitative analyses explicitly recognize that student university choice is a series of related decisions (DesJardins, Ahlburg, and McCall, 2006). For example, DesJardins and colleagues use a random utility model of student university choice to simultaneously estimate application, admission, and enrollment decisions while controlling for the nonrandom nature of financial aid applications and awards.

Although a small number of studies (e.g., Hossler, Schmit, and Vesper 1999) incorporate both qualitative and quantitative techniques, the vast majority of studies opt for one approach or the other. In their eight-year longitudinal study of student university choice, Hossler, Schmit, and Vesper (1999) administered questionnaires to a sample of 4,923 students and parents eight times between 1987 and 1990 and interviewed a subsample of 56 students and parents nine times between 1989 and 1994.

Based on these arguments, this study adopted both qualitative and quantitative methods to understand university choice decisions of prospective students comprehensively. In the qualitative part of the study moderated multiple regression

93

(MMR) analysis was employed. This type of regression looks for an interaction between moderator variables and another variable in predicting levels of a third variable by using ordinary least squares regression (Stone, 1988).

In this chapter of the study, the major aspects of the research design and methodology utilized are delineated. In the next chapter, the analyses of the data collected from the survey are discussed and the results are presented.

CHAPTER FIVE

DATA ANALYSIS AND RESULTS

This chapter contains a discussion of descriptive statistics and pre-analysis data

screening and hypothesis testing. Following this, the results of the exploratory factor

analyses conducted for each construct are presented.

Demographic Profile of the Students

Demographics such as gender, level of mother's education, level of father's education,

household income, the type of high school graduated were included in this study in order

to depict a demographic profiles of students.

Table 8 illustrates that in terms of gender the sample is almost equally

represented. Of the 421 students, 55.6 % of were males and 44.4 % were females. In

addition, 72.9 percent of the students were general high school graduates, 21.4 percent

vocational and technical high schools graduates, 4.5 percent of were private high school

graduates, and 1.2 percent of them are religious high school graduates. When compared

with the profile of Istanbul reported by Istanbul Directorate of National Education

(2010) it was seen that there is a close match between the two profiles.

With respect to monthly household income level of students, data showed that

68.9 % of the students' parents' monthly income was below 2000 TL, whereas 31 %

report monthly household income in excess of 2000 TL. More than half of the reported

monthly household income fall between 1000 TL and 2999 TL, with 50.1 % of the

respondents reporting monthly household incomes between 1000 TL and 1999 TL and

19 % between 2000 TL and 2999 TL.

Table 8. Demographic Profile of the Students

Characteristics	Frequency	Sample %
Gender		
Male	234	55.60
Female	187	44.40
Level of mother's education		
Literate	32	7.60
Primary school	175	41.60
Secondary school	64	15.20
High school	110	26.10
University	39	9.30
Graduate school	1	.20
Level of father's education		
Literate	9	2.10
Primary school	132	31.40
Secondary school	79	18.80
High school	124	29.50
University	71	16.90
Graduate school	6	1.40
Monthly household income		
Less than 1000 TL	79	18.80
1000-1999 TL	211	50.10
2000-2999 TL	80	19.00
3000-3999 TL	17	4.00
4000-4999 TL	17	4.00
More than 5000 TL	17	4.00
Type of high school		
General	307	72.90
Vocational and Technical	90	21.40
Private	19	4.50
Religious	5	1.20

The majority of the students identified a primary level diploma (primary and

secondary school) as being their mothers' (56.8 %) and fathers' (50.21 %) highest level

of education. The next level of education predominated between those mothers and

fathers who have the high school degree. The data showed that 26.1 % of the mothers and 29.5 % of fathers had a high school diploma.

Non-Response Bias

It is important to assess non-response bias since it influences the generalizability of the statistical analysis that is performed on those who respond. Evaluation of the effect of nonresponse is difficult because only limited data is available for the nonrespondents. To deal with these problems, multiple methods were used to investigate potential nonresponse bias. One of the evaluation approaches is the examination of response rates. While the level of nonresponse does not necessarily translate to bias, large differences in the response rates of subgroups serve as indicators that potential biases may exist. In this study the obtained response rate was 85 percent.

Preliminary Data Analyses

Preliminary data analysis includes addressing missing data, detecting outliers, and insuring assumptions are met for appropriate data analysis. Data was examined using a variety of techniques to insure assumptions were met for the selected statistical procedures and multivariate data analysis. According to Hair et al. (2010), assumptions included: (1) Linearity of the phenomenon measured, (2) Constant variance of the error terms, (3) Independence of the error terms, (4) Normality of the error term distribution. Besides, multiple linear regression analysis assumes that there is little or no

97

multicollinearity in the data. For that reason multicollinearity was also assessed before the data analyses.

<div align="center">Missing Data Analysis</div>

Although missing data is common in multivariate analysis, it is essential for the researcher to understand and address the issues raised by the missing data (Hair et al., 1998). Thus, following Hair et al. (1998), efforts were made to deal with missing data. First, frequency analysis was conducted by individual case and by scale to detect the extent of missing data. In addition, the range for minimum and maximum values was examined to ensure that all responses are entered correctly. As a rule of thumb, individual cases with less than 10 percent missing data can be ignored. Four cases (# 31, 49, 111, and 413) were excluded from the analysis completely since many of the questions were unanswered. Four hundred twenty eight usable cases remained for further analysis.

There are some methods to deal with negligible missing data. One such method is data imputation. While several approaches of imputing data such as mean substitution, pattern matching, and hot deck imputation exists, the regression imputation was utilized herein. Regression-based imputation takes better advantage of the structure of the existing data (Kline, 2005) to predict the value of the missing scores. Once the data was imputed, descriptive statistics, especially means, standard deviations, and bivariate correlations were calculated for the entire respondent sample (n=428). For comparison purposes, these statistics were also tabulated only for those respondents who had provided complete information on the questionnaire (n= 417). And finally, a random sample of 200 was selected for comparison purposes as recommended by Hair et al.

(1998). The results showed very little differences amongst the three data sets, validating the use of data imputation at this level.

Outliers

Outliers are generally considered data points that are far outside the norm for a variable or population (Osborne and Overbay, 2004). Barnett and Lewis (1994) define outliers as, "...an observation (or subset of observations) that appears to be inconsistent with the remainder of that set of data" (p. 7). The existence and inclusion of one or more outliers can seriously jeopardize the results and conclusions of a regression analysis (Cohen, et al., 2003). In this regard, it is important to assure conclusions are not based on one or more extreme observations (Chatterjee and Price, 1991).

There are several approaches to detect and address outliers. One common method used for multivariate detection of outliers is the Mahalanobis D^2 (Osborne and Overbay, 2004). Mahalanobis D^2 provides a common measure of multidimensional centrality and also has statistical properties that allow for significance testing (Hair et al., 1998). Given the nature of statistical tests, it is suggested that a very conservative level, such as .001, be used as the threshold value for designation as an outlier (Hair et al., 1998). After the identification of the outliers seven problematic cases were deleted to improve the multivariate analysis since there was no demonstrable proof that they represent a segment of the population. After removing the outliers, four hundred and twenty one cases remained for further analysis.

Normality

To assess the normality of each metric scale item, the empirical measures include

skewness and kurtosis measures reflecting the shape of a distribution and the normality

tests of Shapiro-Wilks and Kolmogorov-Smirnov were used. They together provide a

guide as to the items with significant deviations from normality (Hair et al., 2006).

According to Hair et al. (2010), kurtosis refers to the height of the distribution, and

skewness is used to describe the balance of the distribution. Values above or below zero

denote departures from normality. Skewness values falling outside the range of 1 to -1

indicate a substantially skewed distribution (Hair et al., 2006).

All the normality tests were employed for each data set separately (for each

university). The results showed no serious deviations from normality. There were some

variables with deviations from normality such as university image. However, by

definition, this variable should have a bi-modal distribution for each university. Neither

the skewness and kurtosis measures nor Shapiro-Wilks and Kolmogorov-Smirnov tests

indicated any potentially significant departures from normality thus; it is assumed that

the parameter estimates and their associated errors were approximately normally

distributed.

Linearity

Multiple Regression analysis assumes that there is a linear relationship between the

dependent/outcome variable and the independent/predictor variables. The linearity of the

relationship between dependent and independent variables represents the degree to

which the change in the dependent variable is associated with the independent variable (Hair et al., 1998). Linearity is easily examined through residual plots. Similarly, in this study linearity of the relationship between each pair of variables (independent and dependent variables) was visually examined through the use of the scatter plots. Besides, in order to examine the effect of all independent variables separately partial regression plots were used. The examination of the scatter plots did not exhibit any serious nonlinear relationships.

<div align="center">Homogeneity of Error Variance</div>

Homoscedasticity says that variance for the dependent variable will be the same regardless of the value of the independent variable. Homoscedasticity (also labeled Type I homoscedasticity) (Wilcox, 1997) applies to all ordinary least-squares regression models (including MMR). However, when Moderated Multiple Regression is used there is another critical assumption that applies only to MMR models including categorical moderators which is called homogeneity of error variance assumption (Type II homoscedasticity) (Wilcox, 1997). Type II Homoscedacticity refers that the variance in Y that remains after predicting Y from X is equal across moderator-based subgroups (Aguinis, 2004). In order to check homoscedasticity Levene's test was employed. Results of the tests for each categorical variable (gender, aptitude, the campus visit, SES) showed no significant threat of heteroscedasticity.

Independence of Error Terms

It is also assumed in regression that each predicted value is independent, which means that the predicted value is not related to any other prediction; that is they are not sequenced by any variable (Hair et al., 2006). One can best identify such an occurrence by plotting the residuals against any possible sequencing variable. Random, patternless residuals imply independent errors. However, for cross-sectional data there is generally little reason to doubt the validity of assumption unless the observations are ordered in some particular way. Since there was no such a pattern in the cross-sectional data of this study it is believed that this assumption was fulfilled.

Multicollinearity

The use and interpretation of multiple regression models often depend on the estimates of individual regression coefficient. The predictor variables in a regression model are considered orthogonal when they are not linearly related. But, when the regressors are nearly perfectly related, the regression coefficients tend to be unstable and the inferences based on the regression model can be misleading and erroneous. This condition is known as multicollinearity (Mason et. al, 1975).

There are two most common measures for assessing multicollinearity, namely tolerance and its inverse the variance inflation factor (VIF). A commonly given rule of thumb is that VIFs of .10 or higher (or equivalently, tolerances of .10 or less) may be reason for concern (Mason and Perreault, 1991).Using university preference as the dependent variable, VIF and tolerance values were examined. The table 9 below

illustrates the maximum and minimum levels of both VIF and Tolerance values for each

university. As seen in Table 9 none of the VIF or tolerance values exceeds the cutoff

points.

Table 9. VIF and Tolerance Values

	Tolerance	VIF
	Max	Max
	Min	Min
Bogazici	.496	1.235
University	.809	2.016
Fatih	.258	1.610
University	.621	3.880
ITU	.417	1.215
	.823	2.400
Koc	.379	1.463
University	.683	2.636
Sabanci	.351	1.182
University	.846	2.847

Exploratory Factor Analysis (EFA)

Principal component extraction was carried out to reduce the 37-items to a smaller

number of meaningful items and to identify the potential underlying factor structure of

the data. In this study, one of the most popular orthogonal factor rotation methods

Varimax rotation was used since this method maximizes the sum of the variances of

required loadings of the factor matrix and makes interpretation of the results easier than

other rotation methods (Hair et al., 1998).

Prior to running the exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO)

test of sample adequacy and Bartlett's test of sphericity were used to examine the

factorability of the correlations among the item scores. These tests are designed to assess

the extent to which the shared item variance reflects the presence of factors rather than chance correlations (Worthington and Whittaker, 2006). In general, a significant result on Bartlett's test and a KMO value of .60 or greater is required for factor analysis (Tabachnick and Fidell, 2007). In this study, the significant Bartlett's test, χ^2 (595, N = 421) = 5054.712, p < .001, indicated that the 35-item correlation matrix was significantly different from a matrix of unrelated items. Further, the KMO value of .893 suggests that there was an adequate amount of shared variance among items.

Initially, factor analysis was conducted without constraining factors. In other words, the program was allowed identifying factors based on each factor's eigenvalue, which represents the variance explained by each factor. One of the methods for factor extraction, commonly referred to as the "K1 rule" (Thompson, 2004), suggests that only factors with eigenvalues above 1.0 should be interpreted. Originally, there were nine factors with eigenvalues above 1.0, accounting for 58.308% of the variance. However, the scree test indicated that an underlying factor structure of three or four factors was a more likely fit with the data. That means the results of the initial factor extraction and the scree test indicated that alternate factor structures might be more appropriate.

On the other hand, items were expected to load on the seven dimensions derived from literature (i.e., image, social environment, affordability, financial aid, location, communication efforts, and significant persons). Thus, factor analysis retaining all items and restricting the factor structures to models with six and seven was conducted. Although there are debates regarding the cutoff point for the significance of a factor loading, one general principle is that factor loadings greater than .30 are considered minimal; factor loadings over .40 are considered more important; and factor loadings

greater than .50 considered practically significant (Hair et al., 1998). Therefore, in these analyses items that loaded on only one factor at .50 or greater were retained.

Then, in determining which of these models was the most statistically and theoretically sound, (a) the amount of variance each model explained, (b) the item loadings for each factor, (c) the extent to which items loaded on a factor in a way that made theoretical sense was examined. Since the seven-factor model was superior in terms of variance explained and item loadings to six factor model and appeared to group in the most theoretically meaningful way it was decided to go on with seven factors.

After that reliability of each scale was examined. Reliability is estimated in one of four methods: internal consistency, split-half reliability, test-retest reliability, and inter-rater reliability. This study employed the internal consistency method to judge scale's ability to measure each variable. The underlying principle of internal consistency is that the individual items or indicators of a scale should all measure the same construct and thus be highly intercorrelated (Churchill, 1979). The most widely used measure for internal consistency in cross-sectional studies is Cronbach's coefficient alpha (Netemeyer, Bearden, and Sharma, 2003). Although there is no gold standard about how high reliability coefficients must be to be considered as good, it is suggested that coefficient alpha be at least .70 (Nunnally and Bernstein, 1994). Tests of reliability and internal consistency were performed on each of the survey subscales.

While coefficient alpha is certainly useful and informative, the use of additional measures of internal consistency is also recommended (Cortina, 1993). One of the most prominent of these is corrected item-total correlation scores that refer to the correlation of each item with the sum of the other items in its category. A general rule of thumb suggests that the corrected item-total correlation be higher than .40 and items be

eliminated to enhance reliability if their corrected item-total correlation is less than .40 (Zaichowsky, 1985).

In this model, as expected the items that loaded highly on the first factor reflected image of the university. For example, sample items for Factor I include "The graduates of the university gain admission into top graduate schools" and "The University's faculty has a good reputation within the community". Depending on the literature this factor was labeled as Image. One of the seven items of this factor was dropped for low item-total correlation. The six remaining items accounted for 10.2 % of the overall variance with an eigen value of 9.044. Factor loadings of these six items range from .548 to .716 and a Cronbach alpha level of 0.77.

Items that loaded highly on the second factor reflected atmosphere of the university. For example, sample items for Factor II include "The [University name] has variety of student clubs" and "The [University name] offers various student activities outside the class (music festivals, film demonstrations etc.)". These activities were all related with the social environment of the university; therefore, depending on the literature it was labeled as Social Environment. Social environment factor contains six items with loadings range from .485 to .662. Cronbach's alpha coefficient showed that the internal reliability for the factor is .747. Factor II accounted for 8.83 % of the variance with an eigen value of 2.599.

Items that loaded highly on the third factor reflected one of the dimensions of the information sources variable that students use in their choice process. For instance, sample items for Factor III include "The [University name] has an informative web site" and "The [University name] has several ads in newspapers/magazines/billboards", therefore, depending on the literature it is labeled as communication efforts. University

106

communication efforts dimension originally contained 7 items. However, the results of exploratory factor analysis revealed that one item (CE7) did not load on the designated factor. For that reason this item needed to be eliminated from the group measuring for university communication efforts. The process of eliminating the misloaded item on university communication efforts factor yielded much clearer factor structure. The remaining six items loaded on one factor and their factor loadings range from .525 to .660 and its internal reliability based on Cronbach's alpha coefficient is .753. The Factor III accounted for 7.97 % of the variance with an eigen value of 1.912.

Items that loaded highly on the fourth factor reflected one of the dimensions of the information sources variable that students use in their choice process. For example, sample items for Factor IV include "My friends advice me to go to the [University name]" and "My parents advice me to go to the [University name]", therefore, depending on the literature it was labeled as significant persons. The exploratory factor analysis revealed a one-factor solution for significant persons with five items. All the scale items exhibited satisfactory loadings ranging from .558 to .712 and a total Cronbach alpha level of 0.76. Also, the Factor IV accounted for 7.49 % of the variance with an eigen value of 1.431.

Six items loading onto Factor V appear to be linked to expected affordability of the costs of the university (e.g. tuition, travel expenses, food expenses); therefore, depending on the literature it was labeled as affordability. Factor loadings of these six items range from .479 to .712 and scale's internal reliability based on Cronbach's alpha coefficient is .748. The variance explained by the factor V is 6.9 % with an eigen value 1.259.

Factor VI consisted of four financial items with factor loadings ranging from .479 to .712 and a Cronbach alpha level of .748. These financial items were conceptually similar to approaches that universities used to reduce the negative effect of pricing such as providing scholarships and grants. Depending on the literature it was labeled as financial aid. These four financial aid items accounted for 6.92 % of the variance with an eigen value of 1.259.

Items defining factor VII were related to a factor (location) that already exist in the literature. For example, "it is easy to get into the [University name] from my home", and "part of the city in which the [University name] located is very convenient". The Factor VII, having only two items, revealed low internal consistency with an alpha of .454. Even though shorter scales tend to have lower alpha coefficients since alpha increases with the number of scale items, the factor loadings of these items ranging from .594 to .666 indicating good internal consistency for the Factor VII. The variance explained by the factor VII was 5.23% with an eigen value 1.172.

The results of the exploratory factor analyses and reliability analyses were displayed in Table 10 including factor loadings, corrected item-total correlations, Cronbach's coefficient alphas and variance explained percentages. Altogether, the seven factors accounted for 53.74 % of the variance. The Cronbach's coefficient alphas, the corrected item-total correlations and variance explained percentages were all above the suggested cut off points, providing support for the reliability of each scale. The listing of the initial item pools in Appendix A indicates which items were retained and which were eliminated at this step.

Table 10. Results of the Exploratory Factor Analysis (EFA)

Construct/Item	Factor Loading	Corrected Item-Total Correlation	Reliability (Cronbach's Alpha)	KMO measure of sampling adequacy	Bartlett's test of Sphericity
Image			.777	.824	.000
Image 1	.559	.449			
Image 2	.549	.508			
Image 3	.686	.527			
Image 4	.716	.553			
Image 5	.548	.531			
Image 6	.627	.605			
Communication Efforts			.753	.754	.000
CE 1	.664	.470			
CE 2	.447	.452			
CE 3	.605	.534			
CE 4	.674	.456			
CE 5	.593	.549			
CE 6	.578	.549			
Significant Persons			.765	.800	.000
SP 1	.705	.484			
SP 2	.649	.510			
SP 3	.712	.613			
SP 4	.558	.560			
SP 5	.564	.529			
Social Environment			.747	.794	.000
SE 1	.515	.465			
SE 2	.662	.541			
SE 3	.485	.451			
SE 4	.587	.479			
SE 5	.590	.461			
SE 6	.640	.542			
Affordability			.723	.797	.000
AF 1	.512	.502			
AF 2	.666	.577			
AF 3	.535	.509			
AF 4	.464	.486			
AF 5	.661	.530			
AF 6	.436	.466			
Financial Aid			.748	.734	.000
FA 1	.479	.480			
FA 2	.619	.557			
FA 3	.687	.545			
FA 4	.712	.596			
Location			.454	.500	.000
L 1	.666	.395			
L 2	.594	.395			
Total Variance Explained (%)		53.746			
KMO Measure of Sampling Adequacy		.893			
Bartlett's Test of Sphericity		.000			

Notes:

a) CE= Communication efforts, SE= Social environment, SP = Significant persons, AF = Affordability, FA= Financial aid, L=location

Descriptive Statistics and Correlations

Descriptive statistics and inter-correlations among all main study variables were

computed for each university. Means, standard deviations, and correlations were

reported in Table 11, Table 12, Table 13, Table 14 and Table 15. The correlation

matrices of the summated variables provided an initial test of the hypothesized

relationships. The examination of the intercorrelations among the subscales of the

measures of variables suggested that the relationships were at the hypothesized direction

and many of them were supported at the .01 significance level. Most of the correlations

among university characteristics, university communication efforts and significant

persons were significantly correlated with two of the outcome variables. Besides, these

correlations were small enough to suggest that these scales measured independent

constructs (Nunnally, 1978). That means, key variables of the study were correlated but

none of them exceeded the recommended threshold of (.85) discriminant validity (Kline,

2005).

Table 11. Means (M) and Standard Deviations (SD), and Correlations across Main Study Variables
(Bogazici University)

	M	SD	I	SE	CE	SP	AF	FA	L	ATU	Pre
I	5.4	.67	1	.587(**)	.379(**)	.514(**)	-.480(**)	.307(**)	.309(**)	.309(**)	.166(*)
SE	5.1	.70	.587(**)	1	.491(**)	.482(**)	-.498(**)	.434(**)	.366(**)	.191(**)	.021
CE	4.6	1.0	.379(**)	.491(**)	1	.394(**)	-.461(**)	.511(**)	.223(**)	.166(*)	.124
SP	5.0	1.0	.514(**)	.482(**)	.394(**)	1	-.452(**)	.416(**)	.309(**)	.253(**)	.236(**)
AF	2.1	.87	-.480(**)	-.498(**)	-.461(**)	-.452(**)	1	-.633(**)	-.333(**)	-.270(**)	-.231(**)
FA	4.3	1.2	.307(**)	.434(**)	.511(**)	.416(**)	-.633(**)	1	.334(**)	.056	.073
L	4.6	1.2	.309(**)	.366(**)	.223(**)	.309(**)	-.333(**)	.334(**)	1	.196(**)	.071
ATU	5.5	.79	.309(**)	. 191(**)	.166(*)	.253(**)	-.270(**)	.056	.196(**)	1	.624(**)
Pre	5.3	1.3	.166(*)	.021	.124	.236(**)	-.231(**)	.073	.071	.624(**)	1

Notes:
a. Mean is calculated by summing and averaging the corresponding items for each construct.
b. Values below the diagonal are correlation coefficients. Values above the diagonal are squared correlations.
c. All correlations are Pearson's correlation estimates
d. ** *p<.01* * *p < .05*
e. I= University Image, SE = Social Environment, CE= Communication Efforts, SP = Significant Persons, AF = Affordability, FA= Financial Aid, L= Location of University, ATU= Attitude toward University, Pre= University Preference

Table 12. Means (M) and Standard Deviations (SD), and Correlations across Main Study Variables (ITU)

	M	SD	I	SE	CE	SP	AF	FA	L	ATU	Pre
I	5.1	.73	1	.630(**)	.392(**)	.567(**)	-.349(**)	.368(**)	.433(**)	.384(**)	.290(**)
SE	4.7	.79	.630(**)	1	.549(**)	.496(**)	-.487(**)	.534(**)	.327(**)	.391(**)	.196 (**)
CE	4.2	.95	.392(**)	.549(**)	1	.455(**)	-.421(**)	.560(**)	.224(**)	.303(**)	.245(**)
SP	4.8	.96	.567(**)	.496(**)	.455(**)	1	-.304(**)	.394(**)	.238(**)	.349(**)	.343(**)
AF	2.1	.87	-.349(**)	-.487(**)	-.421(**)	-.304(**)	1	-.636(**)	-.270(**)	-.045	-.023
FA	4.2	1.0	.368(**)	.534(**)	.560(**)	.394(**)	-.636(**)	1	.168(*)	.128	.063
L	4.9	.99	.433(**)	.327(**)	.224(**)	.238(**)	-.270(**)	.168(*)	1	.252(**)	.196(**)
ATU	5.3	.84	. 384 (**)	. 391(**)	.303(**)	.349(**)	-.045	.128(**)	.252(**)	1	.628(**)
Pre	5.1	1.2	. 290(**)	. 196 (**)	.245(**)	.343(**)	-.023	.063(**)	.196(**)	.628(**)	1

Notes:

a. Mean is calculated by summing and averaging the corresponding items for each construct.

b. Values below the diagonal are correlation coefficients. Values above the diagonal are squared correlations.

c. All correlations are Pearson's correlation estimates

d. ** *p<.01* * *p < .05*

e. I= University Image, SE = Social Environment, CE= Communication Efforts, SP = Significant Persons, AF = Affordability, FA= Financial Aid, L= Location of Univerisity, ATU= Attitude toward University, Pre= University Preference

Table 13. Means (M) and Standard Deviations (SD), and Correlations across Main Study Variables
    (Sabanci University)

	M	SD	I	SE	CE	SP	AF	FA	L	ATU	Pre
I	4.8	.85	1	.733(**)	.292(**)	.482(**)	-.492(**)	.506(**)	.125(**)	.491(**)	.286(**)
SE	4.6	.92	.733(**)	1	.412(**)	.462(**)	-.542(**)	.580(**)	.207(**)	.429(**)	.188(**)
CE	4.5	.94	.292(**)	.412(**)	1	.237(**)	-.346(**)	.455(**)	.322(**)	.151(*)	.089
SP	3.8	1.2	.482(**)	.462(**)	.237(**)	1	-.574(**)	.427(**)	.268(**)	.397(**)	.393(**)
AF	3.1	.98	-.492(**)	-.542(**)	-.346(**)	-.574(**)	1	-.723(**)	-.195(**)	-.414(**)	-.271(**)
FA	4.1	1.0	.506(**)	.580(**)	.455(**)	.427(**)	-.723(**)	1	.225(**)	.285(**)	.142(*)
L	3.7	1.3	.125(**)	.207(**)	.322(**)	.268(**)	-.195(**)	.255(**)	1	.176(*)	.224(**)
ATU	4.5	1.2	.491(**)	. 429(**)	.151(*)	.397(**)	-.414(**)	.285(**)	.176(*)	1	.601(**)
Pre	3.7	1.8	.286(*)	.188(**)	.089	.393(**)	-.271(**)	.142(*)	.224	.224(**)	1

Notes:

a. Mean is calculated by summing and averaging the corresponding items for each construct.

b. Values below the diagonal are correlation coefficients. Values above the diagonal are squared correlations.

c. All correlations are Pearson's correlation estimates

d. ** p<.01 * p < .05

e. I= University Image, SE = Social Environment, CE= Communication Efforts, SP = Significant Persons, AF = Affordability, FA= Financial Aid, L= Location of Univerisity, ATU= Attitude toward University, Pre= University Preference

Table 14. Means (M) and Standard Deviations (SD), and Correlations across Main Study Variables
(Koc University)

	M	SD	I	SE	CE	SP	AF	FA	L	ATU	Pre
I	4.7	.93	1	.606(**)	.430(**)	.430(**)	.366(**)	.459(**)	.401(**)	.516(**)	.315(**)
SE	4.5	.96	.658(**)	1	.487(**)	.487(**)	.481(**)	.559(**)	.369(**)	.440(**)	.327(**)
CE	4.4	.91	.606(**)	.722(**)	1	.370(**)	.396(**)	.495(**)	.453(**)	.323(**)	.328(**)
SP	3.7	1.3	.430(**)	.487(**)	.370(**)	1	.578(**)	.397(**)	.390(**)	.512(**)	.527(**)
AF	3.9	.91	.366(**)	.481(**)	.396(**)	.578(**)	1	.597(**)	.413(**)	.332(**)	.400(**)
FA	4.1	.97	.459(**)	.559(**)	.495(**)	.397(**)	.597(**)	1	.418(**)	.265(**)	.272(**)
L	4.1	1.2	.401(**)	.369(**)	.453(**)	.390(**)	.413(**)	.418(**)	1	.227(**)	.311(**)
ATU	4.4	1.3	.516(**)	. 440(**)	.323(**)	.512(**)	.332(**)	.265(**)	.227(**)	1	.652(**)
Pre	3.9	1.8	.315(**)	.327(**)	.328(**)	.527(**)	.400(**)	.272(**)	.311(**)	.652(**)	1

Notes:
a. Mean is calculated by summing and averaging the corresponding items for each construct.
b. Values below the diagonal are correlation coefficients. Values above the diagonal are squared correlations.
c. All correlations are Pearson's correlation estimates
d. ** *p<.01*
e. I= University Image, SE = Social Environment, CE= Communication Efforts, SP = Significant Persons, AF = Affordability, FA= Financial Aid, L= Location of University,
ATU= Attitude toward University, Pre= University Preference

Table 15. Means (M) and Standard Deviations (SD), and Correlations across Main Study Variables
(Fatih University)

	M	SD	I	SE	CE	SP	AF	FA	L	ATU	Pre
I	4.0	1.1	1	.791(**)	.721(**)	.695(**)	.591(**)	.628(**)	.553(**)	.655(**)	.530(**)
SE	4.0	1.1	.791(**)	1	.743(**)	.606(**)	.660(**)	.706(**)	.474(**)	.550(**)	.416(**)
CE	4.0	1.1	.721(**)	.743(**)	1	.483(**)	.547(**)	.688(**)	.554(**)	.434(**)	.337(**)
SP	3.3	1.3	.695(**)	.606(**)	.483(**)	1	.647(**)	.563(**)	.391(**)	.635(**)	.552(**)
AF	3.7	1.0	.591(**)	.660(**)	.547(**)	.647(**)	1	.694(**)	.461(**)	.453(**)	.413(**)
FA	3.8	1.1	.628(**)	.706(**)	.688(**)	.563(**)	.694(**)	1	.503(**)	.409(**)	.338(**)
L	3.9	1.2	.553(**)	.474(**)	.554(**)	.391(**)	.461(**)	.503(**)	1	.396(**)	.308(**)
ATU	3.6	1.6	.655(**)	. 550(**)	.434(**)	.635(**)	.453(**)	.409(**)	.396(**)	1	.804(**)
Pre	3.2	1.9	.530(**)	.416(**)	.337(**)	.552(**)	.413(**)	.338(**)	.308(**)	.804(**)	1

Notes:

a. Mean is calculated by summing and averaging the corresponding items for each construct.

b. Values below the diagonal are correlation coefficients. Values above the diagonal are squared correlations.

c. All correlations are Pearson's correlation estimates

d. ** $p<.01$

e. I= University Image, SE = Social Environment, CE= Communication Efforts, SP = Significant Persons, AF = Affordability, FA= Financial Aid, L= Location of Univerisity, ATU= Attitude toward University, Pre= University Preference

Main Analyses

Analyses of this study consist of three main parts. In the first part of the analyses, the research questions that examine whether university characteristics, information sources, the campus visit and student characteristics predict the student's attitude toward university is addressed using hierarchical multiple regression analyses. The research questions examining the potential moderating effect of the campus visit on the association of university characteristics and information sources with attitude toward university were also tested in these analyses.

In the second part of the analyses the research question that examines the potential mediating role of attitude toward university in the relationship of the antecedents (i.e university characteristics, information sources, the campus visit, and student characteristics) with preference for a university was tested using procedures outlined by Baron and Kenny (1986).

In the last part of the analyses research questions that examine the degree of importance of university characteristics, information sources, and student characteristics in the public versus private university and mother tongue medium university versus foreign language medium university preferences was addressed using hierarchical multiple regression analyses.

Analysis I

To address the relationship between main study variables (university characteristics, significant persons, university communication efforts, the campus visit) and their

116

interactions with student characteristics (gender, SES, religiosity, aptitude), and student attitude toward university three step hierarchical regression analyses were conducted for each of the universities (Bogazici University, Koc University, Fatih University, Sabanci University, ITU). In each of these analyses in the first step student characteristics were entered as one block into the analysis. Then, main study variables were entered into the analysis. Finally, the cross product terms which were calculated as the product of main study variables and student characteristics were entered in the third block. The interaction (or moderator) effect in a hierarchical regression model was estimated by including a cross-product term as an additional exogenous variable as in

$$y = \alpha_1 x_1 + \alpha_2 x_2 + \alpha_3 x_1 x_2 + \alpha_0 + \alpha_c x_c + \varepsilon$$

where x_c plays the role of other covariates that are not part of the moderated element. This $x_1 x_2$ cross-product is likely to be correlated with the term x_1 since x_2 can be thought of as a non-constant multiplier coefficient of x_1. This has been interpreted as a form of multicollinearity, and collinearity makes it difficult to distinguish the separate effects of $x_1 x_2$ and x_1 (and/or x_2). In response to this problem, various researchers including Aiken and West (1991) and Jaccard, Wan, and Turrisi (1990) recommend mean-centering the variables x_1 and x_2 as an approach to alleviating collinearity related concerns (Echambadi and Hess, 2007). Subsequently, mean-centered scores for in predictor variables were computed and interaction terms were created from these centered variables prior to conducting hierarchical regression analysis. Besides, the observed alphas for the interaction terms were divided by two to obtain one-tailed test results following the statement of Bing et al. (2007):

> We recommend that if the researcher has an a priori hypothesis as to the
> form of the interaction, a one-tailed test for the interaction term in MHMR

[moderated hierarchical multiple regression] is appropriate. […] The observed

alpha from the second step in MHMR is based on the two-tailed F test for the

ΔR2 when adding the interaction term to the equation. However, if one particular

nonparallel pattern of slopes is being predicted and if it is obtained, then the

researcher could divide the observed alpha for the interaction term by two to

obtain the a priori one-tailed test for the interaction (p. 150).

In the first analysis main effect terms of student characteristics (gender,

religiosity, SES, aptitude) were entered in step 1, the main effect terms of university

characteristics (image, social environment, location, financial aid provided by the

university and affordability), information sources (communication efforts, and

significant persons) and the campus visit were entered in step 2, and finally the all

interaction terms were entered in step 3. The interactions that were not hypothesized

were also included in the third model for exploratory purposes. Attitude toward

university (Bogazici University) served as the criterion variable in all steps.

In the first model attitude toward university (Bogazici University) was not

predicted significantly. In the second model attitude toward university was predicted

significantly $(\Delta \ R^2 = .171, \ F_{(8,195)} = 5.201, \ p< .001)$, with 19.7 % of the variance

accounted for by the predictors (see Table 16). In this model image, affordability,

financial aid and location were significant predictors of attitude toward university. On

the basis of regression results image (β=.185), location (β=.145), and affordability (β=

.273) were identified to be predictors of attitude toward university in the expected

positive way. These findings were in line with Hypotheses 1, 3, 4. Regression results

showed that, unexpectedly, financial aid provided by the university was negatively

related to attitude toward university (β= -.287). In other words, when students perceived

financial aid provided by university higher, their attitudes toward university was lower. This finding was in contrast to Hypothesis 5, which proposes a positive relationship between financial aid provided by the university and attitude toward university.

Adding the interaction terms in the third model yielded a significant change in variance accounted for $(\Delta R^2 = .208, F_{(35,160)} = 1.597, p< .05)$. In this model, interaction of the campus visit and significant persons, religiosity and location, aptitude and communication efforts, aptitude and affordability, and aptitude and location were significant predictors of attitude toward university. Because dummy coding was used and the group that visited the university campus received a value of 1, the negative coefficient (β= -.326) indicated that the effect of significant persons on students' attitude toward Bogazici University was significantly higher for students who never visited the Bogazici University campus in comparison to those who visited, thus H8d was not supported. Because dummy coding was also used for aptitude level of the students and the group that had high GPA score received a value of 1, the positive coefficient of aptitude and affordability interaction (β= .306) indicated that the effect of affordability on students' attitude toward Bogazici University was significantly higher for high aptitude students in comparison to low aptitude students, thus Hypothesis 11d was not supported. The positive coefficient of aptitude and location interaction (β=.231) indicated that the effect of location on students' attitude toward Bogazici University was significantly higher for high aptitude students in comparison to low aptitude students. This finding was not in line with the Hypothesis 11c.

The results also revealed evidence for a number of unhypothesized relationships, including the relationship between aptitude and communication efforts interaction and attitude toward university and religiosity and location interaction and attitude toward

119

university. These relationships were analyzed in an exploratory fashion. The negative

coefficient of aptitude and communication efforts interaction (β= -.222) indicated that

the effect of communication efforts on students' attitude toward Bogazici University was

significantly higher for low aptitude students in comparison to high aptitude students.

The negative coefficient of religiosity and location interaction (β= -.198) indicated that

the effect of location on students' attitude toward Bogazici University was significantly

higher for low religious students in comparison to high religious students.

Table 16. Hierarchical Regression Results for Bogazici University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	At_T_Bo					.026	.007	.026	.127
		Gender	-.183	.113	-.113				
		Apt	-.208	.113	-.130				
		SES	-.014	.060	-.016				
		Rel	.002	.037	.004				
2	At_T_Bo					.197	.148	.171	.000
		Gender	-.162	.107	-.100				
		Apt*	-.185	.107	-.115				
		SES	-.047	.059	-.054				
		Rel	.038	.036	.071				
		Ima*	.216	.102	.185				
		SocE	-.057	.102	-.051				
		ComE	.024	.066	.031				
		SignP	.085	.065	.109				
		Afford*	.247	.084	.273				
		Faid**	-.181	.057	-.287				
		Loc*	.093	.048	.145				
		CV	.079	.050	.108				
3^	At_T_Bo					.405	.230	.208	.014
		CV * Ima	.103	.122	.111				
		CV*SocE	.142	.096	.166				
		CV * CoE	-.043	.065	-.062				
		CV*SignP**	-.222	.073	-.326				
		CV * Afford	.030	.102	.034				
		CV * FAid	-.016	.060	-.027				
		CV * Loc	-.004	.057	-.009				
		G * Ima	.078	.246	.055				
		G * SocE	.011	.244	.008				
		G * CoE	.013	.146	.014				
		G * SignP	-.104	.209	-.118				
		G * Afford	.028	.202	.025				
		G * FAid	-.145	.138	-.189				
		G * Loc	.016	.102	.019				
		SES * Ima	-.044	.155	-.034				

Table 16. continued.

SES * SocE	-.096	.132	-.076
SES * CoE	.009	.080	.010
SES *Afford	-.122	.112	-.113
SES * FAid	.011	.077	.014
SES * Loc	.009	.146	.024
Rel * Ima	-.088	.101	-.103
Rel * SocE	-.041	.103	-.049
Rel * CoE	.032	.052	.063
Rel * SignP	-.053	.047	-.103
Rel * Afford	.080	.056	.136
Rel * FAid	-.017	.046	-.041
Rel * Loc**	-.075	.031	-.198
Apt * Ima	.165	.217	.099
Apt * SocE	-.165	.226	-.104
Apt * CoE**	-.242	.133	-.222
Apt * SignP	-.213	.169	-.168
Apt * Afford**	.429	.197	.306
Apt * FAid	.057	.126	.056
Apt * Loc*	.222	.111	.231

Notes:
a) ** p < .01, * p < .05
b) At_T_Bo = Attitude toward Bogazici, Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, G =gender, Rel = religiosity, Apt= Aptitude, Sig. = Significant (one-tailed)
c) ^ = Variables in the first and second model are included in the analysis but not depicted

In the second analysis main effect terms of student characteristics (gender, religiosity, SES, aptitude) were entered in step 1, the main effect terms of university characteristics (image, social environment, location, financial aid provided by the university and affordability), information sources (communication efforts, and significant persons) and the campus visit were entered in step 2, and finally the all interaction terms were entered in step 3. The interactions that were not hypothesized were also included in the third model for exploratory purposes. Attitude toward university (ITU) served as the criterion variable in all steps.

In the first model attitude toward university (ITU) was not predicted significantly. In the second model attitude toward university was predicted significantly ($\Delta R^2 = $ .230, $F_{(8,195)} = 7.481$, $p< .001$), with 25.1 % of the variance accounted for by the

predictors (see Table 17). In this model social environment, significant persons, and financial aid were significant predictors of attitude toward university. On the basis of regression results social environment (β=.244) and significant persons (β=.166) identified to be predictors of attitude toward university in the expected positive way. These findings were in line with Hypotheses 2, 7. Regression results show that, unexpectedly, financial aid provided by the university was negatively related to attitude toward university (β= -.178), thus, Hypothesis 5 was not supported.

Adding the interaction terms in the third model yielded a significant change in variance accounted for ($\Delta R^2 =$ .201, F $_{(35,160)}$ = 1.682, p< .01). In this model, interactions of the campus visit and significant persons, religiosity and location, religiosity and communication efforts, aptitude and social environment, and aptitude and location were significant predictors of attitude toward university. Because dummy coding was used and the group that visited the university campus received a value of 1, the negative coefficient (β=-.192) indicated that the effect of significant persons on students' attitude toward ITU was significantly higher for students who never visited the ITU campus in comparison to those who visited, thus H8d was not supported. Because dummy coding was also used for aptitude level of the students and the group that had high GPA score received a value of 1, the negative coefficient of aptitude and location interaction (β= -.251) indicated that the effect of location on students' attitude toward ITU was significantly higher for low aptitude students in comparison to high aptitude students. This finding was in line with the Hypothesis 11c.

The results also revealed evidence for a number of unhypothesized relationships, including the relationship between aptitude and social environment interaction and attitude toward university, religiosity and location interaction and attitude toward

122

university, and religiosity and communication efforts interaction and attitude toward

university. The negative coefficient of aptitude and social environment interaction (β= -.351) indicated that the effect of social environment on students' attitude toward ITU was significantly higher for low aptitude students in comparison to high aptitude students. The negative coefficient of religiosity and location interaction (β= -.261) indicated that the effect of location on students' attitude toward ITU was significantly higher for low religious students in comparison to high religious students. The positive coefficient of religiosity and communication efforts interaction (β= .248) indicated that the effect of communication efforts on students' attitude toward ITU was significantly higher for high religious students in comparison to low religious students.

Table 17. Hierarchical Regression Results for ITU

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjus ted R^2	Change in R^2	Sig. F Change
1	At_T_ITU					.022	.002	.002	.174
		Gender	-.032	.121	-.018				
		Apt	-.178	.120	-.104				
		SES	-.087	.064	-.095				
		Rel	.013	.039	.023				
2	At_T_ ITU					.251	.205	.230	.000
		Gender	.022	.112	.013				
		Apt	-.128	.108	-.075				
		SES	-.069	.058	-.076				
		Rel	.032	.036	.057				
		Ima	.150	.104	.131				
		SocE**	.258	.100	.244				
		CoE	.104	.074	.118				
		SignP*	.145	.072	.166				
		Afford	.031	.089	.034				
		Faid*	-.145	.078	-.178				
		Loc	.073	.059	.087				
		CV	.031	.108	.018				
3^	At_T_ ITU					.453	.292	.201	.008
		CV * Ima-	.131	.222	-.077				
		CV * SocE	-.048	.221	-.032				
		CV * CoE	.087	.168	.073				
		CV * SignP*	-.195	.092	-.190				
		CV * Afford	-.112	.191	-.088				
		CV * FAid	-.005	.172	-.005				
		CV * Loc	.124	.129	.112				
		G * Ima	.097	.232	.070				
		G * SocE	-.160	.226	-.124				

123

Table 17. continued.

G * CoE	.114	.162	.101	
G * SignP	-.054	.186	-.053	
G * Afford	.220	.242	.191	
G * FAid	-.134	.191	-.128	
G * Loc	-.157	.134	-.142	
SES * Ima	-.089	.133	-.076	
SES * SocE	-.063	.133	-.054	
SES * CoE	.005	.089	.005	
SES * SignP	.047	.086	.057	
SES * Afford	-.029	.130	-.024	
SES * FAid	.086	.111	.088	
SES * Loc	.090	.074	.097	
Rel * Ima	-.079	.088	-.099	
Rel * SocE	-.077	.079	-.112	
Rel * CoE*	.129	.060	.235	
Rel * SignP	-.019	.048	-.037	
Rel * Afford	.014	.065	.024	
Rel * FAid	.030	.070	.054	
Rel * Loc**	-.145	.046	-.265	
Apt * Ima	.293	.226	.183	
Apt * SocE*	-.531	.228	-.339	
Apt * ComE	.201	.162	.165	
Apt * SignP	.185	.165	.142	
Apt * Afford	.217	.217	.162	
Apt * FAid	-.158	.180	-.128	
Apt * Loc**	-.317	.125	-.251	

Notes:
a) ** p < .01, * p < .05
b) At_T_ITU = Attitude toward ITU, Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, G =gender, Rel = religiosity, Apt= Aptitude, Sig. = Significant (one-tailed)
c) ^ = Variables in the first and second model are included in the analysis but not depicted

In the third analysis the main effect terms of student characteristics (gender, religiosity, SES, aptitude) were entered in step 1, the main effect terms of university characteristics (image, social environment, location, financial aid provided by the university and affordability), information sources (communication efforts, and significant persons) and the campus visit were entered in step 2, and finally the all interaction terms were entered in step 3. The interactions that were not hypothesized were also included in the third model for exploratory purposes. Attitude toward university (Sabanci University) served as the criterion variable in all steps.

124

In the first regression model attitude toward university (Sabanci University) was predicted significantly ($F_{(4,203)} = 2.403$, $p < .05$), with 4.5 % of the variance accounted for by the predictors (see Table 18). Aptitude and religiosity were significant predictors of attitude toward university. Because dummy coding was used and the group that have high level of aptitude received a value of 1, the negative beta coefficient ($\beta = -.154$) indicated that low aptitude students had more favorable attitudes toward Sabanci University than high aptitude students. Positive beta coefficient ($\beta = .123$) of religiosity indicated that high religious students had more favorable attitudes toward Sabanci University than their lower counterparts.

In the second model attitude toward university was predicted significantly ($\Delta R^2 = .287$, $F_{(8,195)} = 10.453$, $p < .001$), with 33.2 % of the variance accounted for by the predictors. In this model image, affordability, and financial aid were significant predictors of attitude toward university. On the basis of regression results image ($\beta = .337$) and affordability ($\beta = .249$) were identified to be predictors of attitude toward university in the expected positive way. These findings were in line with Hypotheses 1, 4. Regression results also showed that, unexpectedly, financial aid provided by the university was negatively related to attitude toward university ($\beta = -.160$), thus, Hypothesis 5 was not supported.

Adding the interaction terms in the third model did not yield a significant change in variance accounted for. However, individually a number of unhypothesized interactions including religiosity and communication efforts ($\beta = .203$), SES and communication efforts ($\beta = .239$), and religiosity and location ($\beta = -.143$), and a hypothesized interaction, aptitude and location ($\beta = -.158$) exerted a significant effect on attitude toward university.

Table 18. Hierarchical Regression Results for Sabanci University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	At_T_Sabanci					.045	.026	.045	.025
		Gender	-.122	.176	-.048				
		Apt*	-.388	.175	-.154				
		SES	.113	.094	.084				
		Rel*	.102	.058	.123				
2	At_T_ Sabanci					.332	.291	.287	.000
		Gender	-.057	.154	-.022				
		Apt	-.130	.153	-.051				
		SES	- .033	.084	-.024				
		Rel*	.085	.051	.103				
		Ima***	.490	.133	.337				
		SocE	.097	.131	.073				
		CoE	-.001	.105	-.001				
		SignP	.080	.076	.083				
		Afford**	.315	.121	.249				
		Faid*	-.184	.109	-.160				
		Loc	.049	.061	.053				
		CV	.277	.178	.098				
3	At_T_ Sabanci					.448	.286	.116	.267
		CV * Ima	-.051	.329	-.018				
		CV * SocE	-.080	.395	-.026				
		CV * CoE	.035	.307	.013				
		CV * SignP	-.009	.212	-.006				
		CV * Afford	.061	.327	.024				
		CV * FAid	.349	.303	.163				
		CV * Loc	-.008	.157	-.006				
		G * Ima	-.127	.327	-.067				
		G * SocE	.229	.316	.136				
		G * CoE	-.336	.243	-.209				
		G * SignP	.077	.181	.062				
		G * Afford	-.211	.280	-.131				
		G * FAid	-.113	.259	-.081				
		G * Loc	.157	.144	.136				
		SES * Ima	-.194	.172	-.119				
		SES * SocE	-.015	.168	-.010				
		SES * CoE**	.364	.146	.239				
		SES * SignP	.075	.095	.072				
		SES * Afford	-.179	.182	-.126				
		SES * FAid	.015	.150	.012				
		SES * Loc	-.083	.073	-.091				
		Rel * Ima	.009	.120	.011				
		Rel * SocE	-.144	.112	-.183				
		Rel * CoE*	.159	.087	.203				
		Rel * SignP	.027	.061	.046				
		Rel * Afford	.008	.092	.009				
		Rel * FAid	-.125	.080	-.180				
		Rel * Loc*	-.085	.050	-.143				
		Apt * Ima	-.119	.321	-.056				
		Apt * SocE	.081	.297	.041				
		Apt * CoE	-.048	.227	-.027				
		Apt * SignP	.048	.176	.033				
		Apt * Afford	-.150	.286	-.080				
		Apt * FAid	.147	.246	.088				

Table 18. continued.

	Apt * Loc*	-.237	.135	-.158

Notes:

a) ***p < .001, **p < .01, *p < .05

b) At_T_Sabanci = Attitude toward Sabanci, Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford = Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, G =gender, Rel = religiosity, Apt= Aptitude, Sig. = Significant (one-tailed)

c) ^ = Variables in the first and second model are included in the analysis but not depicted

In the fourth analysis main effect terms of student characteristics (gender, religiosity, SES, aptitude) were entered in step 1, the main effect terms of university characteristics (image, social environment, location, financial aid provided by the university and affordability), information sources (communication efforts, and significant persons) and the campus visit were entered in step 2, and finally the all interaction terms were entered in step 3. The interactions that were not hypothesized were also included in the third model for exploratory purposes. Attitude toward university (Koc University) served as the criterion variable in all steps.

In the first regression model attitude toward university (Koc University) was predicted significantly ($F_{(4,208)} = 3.507$, $p < .001$), with 6.3 % of the variance accounted for by the predictors (see Table 19). Aptitude and SES were significant predictors of attitude toward university. Because dummy coding was used and the group that have high level of aptitude received a value of 1, the positive beta coefficient ($\beta = .113$) indicated that high aptitude students had more favorable attitudes toward Koc University than low aptitude students. Positive beta coefficient ($\beta = .200$) of SES indicated that high SES students had more favorable attitudes toward Koc University than their lower counterparts.

In the second model attitude toward university was predicted significantly $(\Delta R^2$ = .329, F (8,200) = 13.537, p< .001), with 39.2 % of the variance accounted for by the predictors. On the basis of regression results image (β=.357) and significant persons (β=.319) identified to be predictors of attitude toward university in the expected positive way. These findings were in line with Hypotheses 1, 7.

Adding the interaction terms in the third model did not yield a significant change in variance accounted for. However, individually an unhypothesized interaction, religiosity and image (β= -.187) exerted a significant effect on attitude toward university. Besides, in contrast to Hypothesis 10b, SES and image (β= -.203) interaction exerted a significant effect on attitude toward university.

Table 19. Hierarchical Regression Results for Koc University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	At_T_Koc					.063	.045	.06	.004
		Gender	-.218	.180	-.083				
		Apt*	.348	.211	.113				
		SES**	.284	.098	.200				
		Rel	.013	.059	.015				
2	At_T_ Koc					.392	.356	.329	.000
		Gender	-.114	.151	-.044				
		Apt	.178	.177	.058				
		SES	.052	.086	.037				
		Rel	.029	.049	.034				
		Ima***	.502	.111	.357				
		SocE	.142	.129	.105				
		CoE	-.089	.125	-.062				
		SignP***	.320	.076	.319				
		Afford	.034	.113	.024				
		FAid	-.077	.104	-.057				
		Loc	-.035	.074	-.032				
		CV	.213	.202	.063				
3^	At_T_ Koc					.473	.323	.081	.217
		CV * Ima	-.314	.375	-.101				
		CV * SocE	-.001	.435	.000				
		CV * CoE	.018	.383	.005				
		CV * SignP	-.158	.292	-.080				
		CV * Afford	-.005	.413	-.002				
		CV * FAid	.262	.301	.096				
		CV * Loc	. 088	.202	.041				

128

Table 19. continued.

G * Ima	-.059	.265	-.028
G * SocE	.320	.309	.150
G * CoE	-.420	.301	-.196
G * SignP	-.064	.180	-.044
G * Afford	-.117	.265	-.054
G * FAid	.359	.248	.160
G * Loc	.065	.177	.042
SES * Ima*	-.287	.156	-.203
SES * SocE	.241	.185	.182
SES * CoE	.141	.164	.099
SES * SignP	-.095	.097	-.096
SES *Afford	.099	.158	.068
SES * FAid	-.043	.142	-.034
SES * Loc	.028	.095	.024
Rel * Ima*	-.165	.083	-.187
Rel * SocE	.128	.097	.158
Rel * CoE	-.009	.091	-.010
Rel * SignP	-.036	.057	-.057
Rel * Afford	-.098	.092	-.102
Rel * FAid	.082	.091	.100
Rel * Loc	-.006	.053	-.008
Apt * Ima	-.115	.297	-.021
Apt * SocE	-.270	.342	-.099
Apt * CoE	.230	.328	.082
Apt * SignP	.201	.214	.092
Apt * Afford	.130	.298	.046
Apt * FAid	-.055	.297	-.021
Apt * Loc	-.085	.234	-.031

Notes:
a)   ***p< .001, ** p < .01, * p < .05
b)   At_T_Koc = Attitude toward Koc, Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, G =gender, Rel = religiosity, Apt= Aptitude, Sig. = Significant (one-tailed)
c)   ^ = Variables in the first and second model are included in the analysis but not depicted

In the fifth analysis main effect terms of student characteristics (gender, religiosity, SES, aptitude) were entered in step 1, the main effect terms of university characteristics (image, social environment, location, financial aid provided by the university and affordability), information sources (communication efforts, and significant persons) and the campus visit were entered in step 2, and finally the all interaction terms were entered in step 3. The interactions that were not hypothesized

were also included in the third model for exploratory purposes. Attitude toward

university (Fatih University) served as the criterion variable in all steps.

In the first regression model attitude toward university (Fatih University) was

predicted significantly ($F_{(4,208)} = 11.115$, $p < .001$), with 17.6 % of the variance

accounted for by the predictors (see Table 20). In this model, religiosity was the

significant predictor of attitude toward university. Positive beta coefficient ($\beta = .354$) of

religiosity indicated that high religious students had more favorable attitudes toward

Fatih University than their lower counterparts.

In the second model attitude toward university was predicted significantly ($\Delta R^2 =$

.394, $F_{(8,200)} = 22.866$, $p < .001$), with 57 % of the variance accounted for by the

predictors. In this model image, significant persons, and the campus visit were

significant predictors of attitude toward university. On the basis of regression results

image ($\beta = .373$) significant persons ($\beta = .328$), and the campus visit ($\beta = .131$) identified to

be predictors of attitude toward university in the expected positive way. These findings

were in line with Hypotheses 1, 7, 8a.

Adding the interaction terms in the third model did not yield a significant change

in variance accounted for. However, individually SES and location ($\beta = -.159$) and

aptitude and affordability interaction ($\beta = -.188$) interactions exerted significant effects

on attitude toward university in the expected negative way.

Table 20. Hierarchical Regression Results for Fatih University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	At_T_Fatih					.176	.160	.176	.000
		Gender	.300	.206	.094				
		Apt	-.133	.242	-.035				
		SES	-.212	.112	-.122				
		Rel***	.370	.068	.354				
2	At_T_ Fatih					.570	.544	.394	.000
		Gender	.176	.181	.055				
		Apt	.031	.088	.008				
		SES	-.186	.053	-.107				
		Rel***	.178	.130	.170				
		Ima***	.521	.130	.373				
		SocE	.156	.131	.109				
		CoE	-.135	.116	-.093				
		SignP***	.402	.090	.328				
		Afford	.049	.111	.033				
		FAid	-.184	.116	-.128				
		Loc	.087	.077	.068				
		CV**	.572	.216	.131				
3^	At_T_ Fatih					.633	.529	.064	.377
		CV * Ima	-.328	.441	-.109				
		CV * SocE	.296	.392	.093				
		CV * CoE	.580	.558	.160				
		CV * SignP	-.090	.356	-.035				
		CV * Afford	-.590	.431	-.158				
		CV * FAid	-.102	.467	-.027				
		CV * Loc	.012	.249	.003				
		G * Ima	.072	.317	.037				
		G * SocE	-.055	.292	-.026				
		G * CoE	-.174	.278	-.086				
		G * SignP	.077	.224	.047				
		G * Afford	-.335	.267	-.153				
		G * FAid	.162	.271	.076				
		G * Loc	-.125	.173	-.070				
		SES * Ima	-.148	.192	-.107				
		SES * SocE	.139	.167	.106				
		SES * CoE	.213	.156	.143				
		SES * SignP	.121	.125	.096				
		SES *Afford	-.069	.128	-.046				
		SES * FAid	-.150	.139	-.105				
		SES * Loc*	-.206	.092	-.159				
		Rel * Ima	.075	.103	.094				
		Rel * SocE	-.017	.098	-.021				
		Rel * CoE	-.112	.086	-.137				
		Rel * SignP	-.029	.070	-.039				
		Rel * Afford	.024	.095	.029				
		Rel * FAid	.093	.091	.117				
		Rel * Loc	-.021	.059	-.026				
		Apt * Ima	-.205	.334	-.078				
		Apt * SocE	.212	.354	.076				
		Apt * CoE	-.294	.284	-.113				
		Apt * SignP	.304	.255	.118				
		Apt *Afford *	-.510	.290	-.188				
		Apt * FAid	.155	.326	.056				

131

Table 20. continued.

Apt * Loc		.091	.228	.036

Notes:
  a) ***p< .001, ** p < .01, * p < .05
  b) At_T_Fatih = Attitude toward Fatih, Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford = Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, G =gender, Rel = religiosity, Apt= Aptitude, Sig. = Significant (one-tailed)
  c) ^ = Variables in the first and second model are included in the analysis but not depicted

The summary of the results on hypotheses testing is given in Table 21.

Table 21. Summary of the Results of Hypotheses Testing

Hypotheses	Bogazici U	ITU	Sabanci U	Koc U	Fatih U
H1: There is a positive relationship between students' favorable perceptions of the image of the university and attitude toward university	S	NS	S	S	S
H2: There is a positive relationship between students' favorable perceptions of the university's social environment and attitude toward university	NS	S	NS	NS	NS
H3: There is a positive relationship between students' favorable perceptions of the university closeness to home and attitude toward university	S	NS	NS	NS	NS
H4: There is a positive relationship between students' perceptions of the affordability of the university and attitude toward university	S	NS	S	NS	NS
H5: There is a positive relationship between students' favorable perceptions of the financial aid provided by university and attitude toward university	NS	NS	NS	NS	NS
H6: There is a positive relationship between students' perceptions of the degree of university communication efforts and attitude toward university	NS	NS	NS	NS	NS

Table 21. continued.

H7: There is a positive relationship between students' favorable perceptions of the significant persons (parents, friends, teachers, school counselors, relatives) and attitude toward university	NS	S	NS	S	S
H8a: There is a positive relationship between students' favorable perceptions of the campus visit and attitude toward university	NS	NS	NS	NS	S
H8c: The relationship between university communication efforts and attitude toward university will be moderated by the campus visit in a positive way such that visiting the campus will increase the strength of the relationship between university communication efforts and attitude toward university	NS	NS	NS	NS	NS
H8d: The relationship between significant persons (parents, friends, teachers, counselors, relatives) and attitude toward university will be moderated by the campus visit in a positive way such that visiting the campus will increase the strength of the relationship between personal information sources and attitude toward university	NS	NS	NS	NS	NS
H9a: Male and female students differ regarding their attitudes toward university	NS	NS	NS	NS	NS
H9b: Gender moderates the effects of perceived image on attitude toward university such that male students' image perceptions will exert stronger positive effects on attitude for than female students	NS	NS	NS	NS	NS
H9c: Gender moderates the effects of perceived social environment on attitude toward university such that male students' social environment perceptions will exert stronger positive effects on attitude for than female studen	NS	NS	NS	NS	NS
H10a: High SES students and low SES students differ regarding their attitudes toward university	NS	NS	NS	S	S

Table 21. continued.

H10b: SES moderates the effects of perceived image on attitude toward university such that high SES students' image perceptions will exert stronger positive effects on attitude for than low SES students	NS	NS	NS	NS	NS
H10c: SES moderates the effects of perceived affordability on attitude toward university such that low SES students' affordability perceptions will exert stronger positive effects on attitude for than high SES students	NS	NS	NS	NS	NS
H10d: SES moderates the effects of perceived financial aid provided by university on attitude toward university such that low SES students' financial aid perceptions will exert stronger positive effects on attitude for than high SES students	NS	NS	NS	NS	NS
H10e: SES moderates the effects of perceived location of the university on attitude toward university such that low SES students' location perceptions will exert stronger positive effects on attitude for than high SES students	NS	NS	NS	NS	NS
H11a: High aptitude students and low aptitude students differ regarding their attitudes toward university	NS	NS	S	S	NS
H11b: Aptitude moderates the effects of perceived image of the university on attitude toward university such that high aptitude students' image perceptions will exert stronger positive effects on attitude for than high low aptitude students	NS	NS	NS	NS	NS
H11c: Aptitude moderates the effects of perceived location of the university on attitude toward university such that low aptitude students' location perceptions will exert stronger positive effects on attitude for than high aptitude students	NS	S	NS	NS	NS

Table 21. continued.

H11d: Aptitude moderates the effects of perceived affordability on attitude toward university such that low aptitude students' affordability perceptions will exert stronger positive effects on attitude for than high aptitude students	NS	NS	NS	NS	NS
H11e: Aptitude moderates the effects of perceived financial aid provided by university on attitude toward university such that low aptitude students' financial aid perceptions will exert stronger positive effects on attitude for than high aptitude students	NS	NS	NS	NS	NS
H12: There is a significant relationship between religiosity and attitude toward university	NS	NS	S	NS	S

Notes:
a) S=Supported, NS=Not supported, U= University

Analyses II

To assess the potential mediating role of attitude toward university in the relationship of

antecedents (image, social environment, communication efforts, significant persons,

affordability, financial aid, location) with university preference was tested using

procedures outlined by Baron and Kenny (1986). According to Baron and Kenny (1986),

mediation can be said to occur when these conditions are satisfied: First, the mediated

(independent) variables, student characteristics (gender, aptitude, SES, religiosity)

university characteristics (image, social environment, financial aid, affordability,

location), information sources (communication efforts, significant persons), and the

campus visit should be associated with the dependent variable (preference for

university); second, in a regression of the dependent variable on the both the mediated

variables and the mediator (attitude toward university), the effect of the mediated

variables should be reduced, whereas the effect of the mediator should be statistically significant. To test such a mediated prediction, following Baron and Kenny (1986) hierarchical regression analyses were conducted for each university.

Following the steps outlined previously for testing mediation, the preference for Bogazici University was first regressed on student characteristics, and then university characteristics, information sources, and the campus visit to establish that there was an effect to mediate (see Table 22, model 1). In the first model preference for Bogazici University was not predicted significantly. In the second model preference for Bogazici University was predicted significantly $(\Delta R^2 = .173, F_{(8,194)} = 4.553, p< .001)$, with 17.3 % of the variance accounted for by the social environment ($\beta= -.289$), significant persons ($\beta=.249$), and the campus visit ($\beta=.198$), fulfilling the first requirement of mediation testing. Next, preference for university was simultaneously regressed on student characteristics, university characteristics, information sources, the campus visit, and attitude toward university (model 3, respectively). In this analysis preference for Bogazici University was predicted significantly $(\Delta R^2 = .277, F_{(1,193)} = 97.127, p< .001)$, with 45 % of the variance. Since the attitude toward Bogazici University was identified to be a predictor of preference for university controlling for the other variables, a requirement of the second step of mediation testing was met. The path from the campus visit to university preference became nonsignificant, suggesting full mediation. The paths from significant persons and social environment to preference for university remained significant, though they were smaller than in step 1, suggesting partial mediation. The regression coefficients from each model appear in Table 22.

Table 22. Testing for Attitude toward University as a Mediator in the Relationship of Antecedents and Preference for University (Bogazici University)

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	R^2 Change	Sig. F Change
1	Preference for Bogazici					.018	-.001	.018	.225
		Gender	-.112	.190	-.041				
		Apt	-.251	.189	-.094				
		SES	-.120	.101	-.083				
		Rel	-.048	.062	-.054				
2^	Preference for Bogazici					.173	.122	.155	.000
		Ima	.181	.174	.093				
		SocE**	-.541	.173	-.289				
		CoE	.070	.112	.054				
		SignP**	.324	.109	.249				
		Afford	.366	.144	.243				
		Faid	-.137	.098	-.130				
		Loc	.013	.079	.012				
		CV**	.523	.191	.198				
3	Preference for Bogazici					.450	.413	.277	.000
		Gender	.100	.150	.037				
		Apt	-.111	.150	-.041				
		SES	-.130	.084	-.090				
		Rel	-.038	.051	-.043				
		Ima	-.046	.144	-.024				
		SocE**	-.426	.142	-.228				
		CoE	.031	.092	.024				
		SignP**	.223	.090	.171				
		Afford	.141	.120	.093				
		FAid	.021	.082	.020				
		Loc	-.055	.065	-.052				
		CV	.256	.158	.097				
		Att_T_Bo***	.989	.100	.592				

Notes:
a) ***p< .001, **p < .01, *p < .05
b) Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, Rel = Religiosity, Apt= Aptitude, Att_T_Bo= Attitude toward Bogazici University, Sig. = Significant (one-tailed)
c) ^ = Variables in the first model are included in the analysis but not depicted

In the second analysis following the steps outlined previously for testing mediation, the preference for ITU was first regressed on student characteristics, and then university characteristics, information sources, and the campus visit to establish that there was an effect to mediate (see Table 23, model 1). In the first model preference for

ITU was predicted significantly ($F_{(4,203)}$ = 2.664, p < .01), with 5 % of the variance

accounted for by SES (β= -.190) fulfilling the first requirement of mediation testing. In

the second model preference for ITU was predicted significantly (ΔR^2 = .168, $F_{(8,195)}$ =

5.238, p < .001), with 21.8 % of the variance accounted for by significant persons

(β=.289), fulfilling the first requirement of mediation testing. Next, preference for

university was simultaneously regressed on student characteristics, university

characteristics, information sources, the campus visit, and attitude toward university

(model 3, respectively). In this analysis preference for ITU was predicted significantly

(ΔR^2 = .241, $F_{(1,194)}$ = 86.626, p < .001), with 45, 9 % of the variance. Since the attitude

toward ITU was identified to be a predictor of preference for university controlling for

the other variables, a requirement of the second step of mediation testing was met. The

paths from significant persons and SES to preference for university remained significant,

though they were smaller than in step 1, suggesting partial mediation. The regression

coefficients from each model appear in Table 23.

Table 23. Testing for Attitude toward University as a Mediator in the Relationship of
Antecedents and Preference for University (ITU)

Model	Dependent Variable	Independent Variables	B	SE	β	R^2	Adjusted R^2	R^2 Change	Sig. F Change
1	Preference for ITU					.050	.031	.050	.017
		Gender	.016	.182	.006				
		Apt	-.212	.181	-.081				
		SES**	-.268	.097	-.190				
		Rel	.046	.060	.053				
2^	Preference for ITU					.218	.170	.168	.000
		Ima	.204	.164	.116				
		SocE	-.049	.157	-.030				
		CoE	.180	.117	.134				
		SignP***	.386	.113	.289				
		Afford	-.067	.139	-.047				

Table 23. continued.

						R	R^2	Adj R^2	Sig.
		Faid	-.169	.122	-.136				
		Loc	.115	.092	.089				
		CV	.187	.169	.073				
3	Preference for ITU					.459	.423	.241	.000
		Gender	.075	.146	.029				
		Apt	-.047	.142	-.018				
		SES**	-.198	.076	-.141				
		Rel	.032	.047	-.037				
		Ima	.073	.137	.042				
		SocE*	-.274	.133	-.169				
		CoE	.089	.098	.066				
		SignP**	.260	.095	.194				
		Afford	-.040	.116	-.028				
		FAid	-.043	.102	-.035				
		Loc	.051	.077	.040				
		CV	.161	.141	.062				
		Att_T_ITU***	.871	.094	.568				

Notes:
a) ***$p < .001$, **$p < .01$, *$p < .05$
b) Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, Rel = Religiosity, Apt= Aptitude, Att_T_ITU= Attitude toward ITU, Sig. = Significant (one-tailed)
c) ^ = Variables in the first model are included in the analysis but not depicted

In the third analysis following the steps outlined previously for testing mediation, the preference for Sabanci University was first regressed on student characteristics, and then university characteristics, information sources, and the campus visit to establish that there was an effect to mediate (see Table 24, model 1). In the first model preference for Sabanci University was predicted significantly ($F_{(4,203)} = 2.179$, $p < .01$), with 4.1 % of the variance accounted for by religiosity ($\beta= .141$) fulfilling the first requirement of mediation testing. In the second model preference for Sabanci University was predicted significantly ($\Delta R^2 = .200$, $F_{(8,195)} = 6.416$, $p < .001$), with 24.1 % of the variance accounted for by image ($\beta=.233$), significant persons ($\beta=.270$), location ($\beta=.124$), and the campus visit ($\beta=.117$), fulfilling the first requirement of mediation testing. Next, preference for university was simultaneously regressed on student characteristics, university characteristics, information sources, the campus visit, and attitude toward

university (model 3, respectively). In this analysis preference for Sabanci University was predicted significantly $(\Delta R^2 = .199$, $F_{(1,194)} = 68.870$, $p < .001$), with 44 % of the variance. Since the attitude toward Sabanci University was identified to be a predictor of preference for university controlling for the other variables, a requirement of the second step of mediation testing was met. The path from significant persons to preference for university remained significant though it was smaller than in step 1, suggests partial mediation. The paths from religiosity, image, location and the campus visit to university preference became nonsignificant, suggesting full mediation. The regression coefficients from each model appear in Table 24.

Table 24. Testing for Attitude toward University as a Mediator in the Relationship of Antecedents and Preference for University (Sabanci University)

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	R^2 Change	Sig. F Change
1						.041	.022	.041	.036
	Preference for Sabanci								
		Gender	.254	.265	.066				
		Apt	-.401	.264	-.106				
		SES	.138	.141	.068				
		Rel*	.177	.087	.141				
2^								.200	.000
	Preference for Sabanci					.241	.194		
		Ima	.510	.211	.233				
		SocE	-.280	.205	-.139				
		CoE	-.075	.147	-.038				
		SignP***	.395	.122	.270				
		Afford	.292	.193	.154				
		Faid	-.225	.174	-.130				
		Loc	.171	.097	.124				
		CV	.499	.285	.117				
3	Preference for Sabanci					.440	.402	.199	.000
		Gender	.378	.212	.099				
		Apt	.029	.213	.008				
		SES	-.004	.116	-.002				
		Rel	.070	.071	.056				
		Ima	.110	.188	.050				
		SocE	-.378	.177	-.188				
		CoE	-.003	.127	-.002				

Table 24. continued.

SignP**	.330	.105	.226
Afford	.033	.170	.018
FAid	-.093	.150	-.054
Loc	.121	.084	.088
CV	.269	.247	.063
Att_T_Sa***	.824	.099	.547

Notes:

a) $^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$

b) Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, Rel = Religiosity, Apt= Aptitude, Att_T_Sa= Attitude toward Sabanci University, Sa= Sabanci University, Sig. = Significant (one-tailed)

c) ^ = Variables in the first model are included in the analysis but not depicted

In the fourth analysis following the steps outlined previously for testing mediation, the preference for Koc University was first regressed on student characteristics, and then university characteristics, information sources, and the campus visit to establish that there was an effect to mediate (see Table 25, model 1). In the first model preference for Koc University was predicted significantly ($F_{(4,208)} = 2.732$, $p < .01$), with 5 % of the variance accounted for by SES ($\beta = .185$) fulfilling the first requirement of mediation testing. In the second model preference for Koc University was predicted significantly $(\Delta R^2 = .270$, $F_{(8,200)} = 9.949$, $p < .001$), with 32 % of the variance accounted for by significant persons ($\beta = .386$), fulfilling the first requirement of mediation testing. Next, preference for university was simultaneously regressed on student characteristics, university characteristics, information sources, the campus visit, and attitude toward university (model 3, respectively). In this analysis preference for Koc University was predicted significantly $(\Delta R^2 = .209$, $F_{(1,199)} = 88.387$, $p < .001$), with 52.9 % of the variance. Since the attitude toward Koc University was identified to be a predictor of preference for university controlling for the other variables, a requirement of the second step of mediation testing was met. The path from significant

persons to preference for university remained significant, though it was smaller than in

step 1, suggesting partial mediation. The path from religiosity to university preference

became nonsignificant, suggesting full mediation. The regression coefficients from each

model appear in Table 25.

Table 25. Testing for Attitude toward University as a Mediator in the Relationship of
Antecedents and Preference for University (Koc University)

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	R^2 Change	Sig. F Change
1	Preference for Koc					.050	.032	.050	.015
		Gender	-.224	.251	-.062				
		Apt	.040	.295	.009				
		SES**	.365	.137	.185				
		Rel	-.079	.082	-.067				
2	Preference for Koc					.320	.280	.270	.000
		Ima	.059	.162	.030				
		SocE	-.118	.189	-.063				
		CoE	.282	.182	.142				
		SignP***	.536	.111	.386				
		Afford	.240	.165	.121				
		Faid	-.059	.153	-.031				
		Loc	.098	.109	.065				
		CV	.000	.297	.000				
3	Preference for Koc					.529	.499	.209	.000
		Gender	.064	.184	.018				
		Apt	-.137	.217	-.032				
		SES	.107	.105	.054				
		Rel	-.080	.060	-.067				
		Ima	-.349	.142	-.179				
		SocE	-.234	.158	-.125				
		CoE	.354	.152	.178				
		SignP**	.276	.096	.199				
		Afford	.212	.138	.107				
		FAid	.004	.128	.002				
		Loc	.127	.091	.084				
		CV	-.173	.248	-.037				
		Att_T_Koc***	.813	.086	.586				

Notes:
a) ***p< .001, **p< .01
b) Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, Rel = Religiosity, Apt= Aptitude, Att_T_Koc= Attitude toward Koc University, Sig. = Significant (one-tailed)
c) ^ = Variables in the first model are included in the analysis but not depicted

In the fifth analysis, following the steps outlined previously for testing mediation, the preference for Fatih University was first regressed on student characteristics, and then university characteristics, information sources, and the campus visit to establish that there was an effect to mediate (see Table 26, model 1). In the first model preference for Fatih University was predicted significantly ($F_{(4,208)} = 6.536$, $p<$ .001), with 11.2 % of the variance accounted for by gender ($\beta= .113$), SES ($\beta= -.115$), and religiosity ($\beta= .241$) fulfilling the first requirement of mediation testing. In the second model preference for Fatih University was predicted significantly ($\Delta R^2 = .310$, $F_{(8,200)} = 13.388$, $p< .001$), with 42.1 % of the variance accounted for by significant persons ($\beta=.298$) and the campus visit ($\beta=.184$), fulfilling the first requirement of mediation testing. Next, preference for university was simultaneously regressed on student characteristics, university characteristics, information sources, the campus visit, and attitude toward university (model 3, respectively). In this analysis preference for Fatih University was predicted significantly ($\Delta R^2 = .250$, $F_{(1,199)} = 151.540$, $p< .001$), with 67.2 % of the variance. Since the attitude toward Fatih University was identified to be a predictor of preference for university controlling for the other variables, a requirement of the second step of mediation testing was met. The path from the campus visit to preference for university remained significant, though it was smaller than in step 1, suggests partial mediation. The paths from gender, SES, religiosity, image, significant persons to university preference became nonsignificant, suggesting full mediation. The regression coefficients from each model appear in Table 26.

Table 26. Testing for Attitude toward University as a Mediator in the Relationship of Antecedents and Preference for University (Fatih University)

Model	Dependent Variable	Independent Variables	B	SE	β	R^2	Adjuste R^2	R^2 Change	Sig. F Change
1	Preference for Fatih					.112	.095	.112	.000
		Gender*	.428	.253	.113				
		Apt	-.345	.298	-.077				
		SES*	.238	.138	-.115				
		Rel***	.300	.083	.241				
2^	Preference for Fatih					.421	.387	.310	.000
		Ima**	.557	.179	.336				
		SocE	-.056	.180	-.033				
		CoE	-.117	.160	-.068				
		SignP***	.434	.124	.298				
		Afford	.134	.152	.076				
		Faid	-.212	.159	-.124				
		Loc	.001	.106	.001				
		CV**	.954	.298	.184				
3	Preference for Fatih					.672	.650	.250	.000
		Gender	.151	.160	.040				
		Apt	-.216	.188	-.048				
		SES	-.088	.093	-.043				
		Rel	-.064	.056	-.052				
		Ima	.085	.141	.052				
		SocE	-.197	.136	-.116				
		CoE	.005	.121	.003				
		SignP	.071	.098	.048				
		Afford	.178	.115	.102				
		FAid	-.046	.121	-.027				
		Loc	-.078	.081	-.051				
		CV*	.437	.229	.084				
		Att_T_Fatih***	.904	.073	.762				

Notes:
a) ***p< .001, **p< .01, *p< .05
b) Ima = Image, SocE= Social Environment, CoE = Communication Effort, SignP = Significant Persons, Afford= Affordability, FAid= Financial aid, Loc= Location, CV = The campus visit, Rel = Religiosity, Apt= Aptitude, Att_T_Fatih= Attitude toward Fatih University, Sig. = Significant (one-tailed)
c) ^ = Variables in the first model are included in the analysis but not depicted

Analysis III

One of the purposes of this study is to understand the importance of university

characteristics, information sources and student characteristics in students' choice of a

different type of university (public versus private, foreign language medium versus

mother tongue medium university). In order to determine the potential determinants of students' preference for public versus private university and foreign language medium university versus mother tongue medium university choice behavior students were asked to evaluate the importance of university characteristics, information sources in a six-point Likert scale with the end points 1="not important at all" and 6= "very important". Students were used a six-point bipolar scale to rate the university pairs: 1= "private university" - 6= "public university" and 1= "foreign language medium university" – 6= "mother tongue medium university".

In order to assess dimensionality/unidimensionality and internal consistency of all the measures in this part of the study, both EFA and reliability tests were conducted. The factors were extracted based on the criterion of eigenvalue greater than one and Principal Component Analysis (PCA) using Varimax rotation procedure in PASW 18.0 is used. For measure purification purposes, items that have low factor loadings (Nunnally, 1978) and high cross-loadings (Comrey, 1973) as well as low item-to-total correlations (Dunn et al., 1994) were excluded from the scale.

The thirty-seven items measuring students' university perceptions had high internal consistency, reflected by a Cronbach's alpha estimate of .93. The means and standard deviations of these variables are shown in Table 27.

Table 27. Descriptives of University Perceptions

	Mean	SD
Advice from parents	3.74	1.7
Availability of international exchange programs with numerous universities	5.17	1.2
Availability of convenient ways of paying school fees	4.79	1.5
Housing expenses provided by university	4.54	1.6
Availability of various student clubs	4.47	1.5
Food expenses provided by university	4.06	1.7
The cost of tuition fees	4.79	1.5

145

Table 27. continued.

Availability of Part-time job opportunities	4.38	1.6
Advice from relatives who are graduates or current students of that university	3.82	1.7
Advertisements in newspapers/magazines/billboards	3.37	1.7
Student activities offered outside class (music festivals, film festivals etc.)	4.47	1.5
Authorities on TV	3.76	1.6
Advice from teachers	4.14	1.6
Availability of various scholarships	4.90	1.4
Graduates gain admission into top graduate schools	5.08	1.3
Advice from friends	3.58	1.5
Web site of the university	3.59	1.6
Graduates get good jobs	5.37	1.1
Attractiveness of campus	4.46	1.4
Free gifts offered by the university (Laptop etc.)	4.05	1.7
Opportunities to participate in a variety of sports	4.49	1.4
University CDs and Brochures	3.40	1.5
Advertisements on TV	3.50	1.6
Reputation of faculty	4.95	1.2
Advice from high school / training center counselor	3.99	1.6
Part of the city in which university is located	4.70	1.5
Rankings in OSYM booklet	4.35	1.6
Foreign language-medium instruction	4.79	1.5
Traveling expenses provided by university	4.43	1.6
Availability of grants	4.39	1.7
Close links with industry	4.93	1.3
Education fairs	4.07	1.5
University catalog	3.81	1.6
Open Days of University	3.97	1.6
Availability of various majors	3.92	1.6
Availability of Internship opportunities	4.59	1.5

Exploratory Factor Analysis for these thirty-seven measures was conducted using Varimax rotation procedure in SPSS 18.0, since dimensions reflecting students university perceptions were judged to be correlated (Hair et al., 2010). Although the items were expected to load on the seven dimensions derived from literature (i.e., image, social environment, communication efforts, significant persons, affordability, financial aid, location), results showed that they represent a different factor structure. Based on the resulting six-factor solution, three items (open days of the university, availability of wide range of majors, availability of internship opportunities) were excluded from

further analyses since they did not have considerable loadings on any of the dimensions underlying the data. Items related with affordability and financial aid loaded on to one factor all together. This factor was named "financial factors". Items that loaded highly on the second factor reflected one of the dimensions of the information sources variable that students use in their choice process, thus it was named "importance of communication efforts". Items loaded highly on the third factor reflected prestige of the university, thus it was named "importance of image". Items that loaded highly on the fourth factor reflected one of the dimensions of the information sources variable that students use in their choice process, thus, it was labeled "importance of significant persons". Items that loaded highly on the fifth factor reflected atmosphere of the university, thus it was named "Importance of Social Environment". Items loaded highly on the last factor related with the location of the university, thus it was labeled "importance of location". Cronbach's alpha estimate for the final thirty-four item scale was .92. Distribution of these items across the factors, internal consistency estimates of the factors, the amount of variance explained by each factor, are shown in Table 28.

Table 28. EFA Results for Measures of University Perceptions

Construct/Item	Factor Loadings	Variance Explained (%)
Financial Factors		30
Availability of grants	.810	
Housing expenses provided by university	.756	
Traveling expenses provided by university	.745	
The cost of tuition fees	.743	
Availability of convenient ways of paying school fees	.708	
Food expenses provided by university	.700	
Availability of various scholarships	.598	
Free gifts offered by the university (Laptop etc.)	.594	
Availability of Part-time job opportunities	.470	

Table 28. continued.

Importance of Communication Efforts		7.6
University catalog	.702	
Advertisements on TV	.684	
University CDs and Brochures	.677	
Web site of the university	.665	
Authorities on TV	.632	
Advertisements in newspapers/magazines/billboards	.620	
Education fairs	.584	
Importance of Image		6.3
Graduates gain admission into top graduate schools	.751	
Graduates get good jobs	.749	
Availability of international exchange programs	.703	
Close links with industry	.617	
Reputation of faculty	.564	
Foreign language-medium instruction	.508	
Rankings in OSYM booklet	.447	
Importance of Significant Persons		5.5
Advice from relatives who are graduates or current students of that university	.744	
Advice from parents	.698	
Advice from friends	.588	
Advice from teachers	.567	
Advice from high school counselors	.519	
Importance of Social Environment		3.8
Opportunities to participate in a variety of sports	.718	
Student activities offered outside class (music festivals, film festivals etc.)	.675	
Availability of various student clubs	.614	
Attractiveness of campus	.556	
Importance of Location		3.1
Part of the city in which university is located	.649	
Ease of getting home	.431	
Total Variance Explained (%)	56.3	
KMO Measure of Sampling Adequacy	.912	
Bartlett's Test of Sphericity	.000	

In order to address the relationship between university characteristics (image, social environment, location), information sources (communication efforts, significant persons) and student characteristics (SES, gender, religiosity, aptitude) and preference for public university versus private university and mother tongue university versus foreign language university two step hierarchical regression analyses were conducted. In

each of these analyses in the first step student characteristics were entered as one block into the analysis. Then university characteristics and information sources were entered into the analysis in the second block.

In the first analysis relative preference for public university versus private university served as criterion variable in all steps. In the first model, preference for public university versus private university was predicted significantly ($F_{(4,416)} = 5.373$, $p < .001$), with 4.9 % of the variance accounted for by the predictors in which SES is the only significant one (see Table 29). Negative beta coefficient ($\beta = -.186$) of SES indicated that low SES students relatively prefer public universities to private universities more than their higher counterparts.

In the second model preference for public university versus private university was predicted significantly ($\Delta R^2 = .035$, $F_{(6,410)} = 2.640$, $p < .01$), with 8.4 % of the variance accounted for by predictors in which Significant persons was the only significant one. On the basis of regression results the degree of importance given to significant persons ($\beta = -.144$) was negatively related to preference for public versus private university.

Table 29. Hierarchical Regression Results for Relative Preference for Public University vs. Private University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	Relative Preference for Public U vs. Private U					.049	.040	.049	.000
		Gender	.146	.097	.032				
		Apt	.251	.155	.078				
		SES***	-.303	.079	-.186				
		Rel	.067	.048	.067				
2	Relative Preference for Public U vs. Private U					.084	.062	.035	.008
		FinaF	.121	.078	.099				
		ICoE	-.087	.085	-.070				
		IImage	.062	.097	.038				
		ISignP**	-.184	.074	-.144				
		ISocEnv	-.092	.084	-.069				
		ILocation	-.028	.066	-.023				

Notes:
a) *** $p < .001$, ** $p < .01$,
b) U= University, Apt= Aptitude, Rel= Religiosity, FinaF= Financial factors, ICoE= importance of communication efforts, ISignP= importance of Significant persons, ISocEnv= importance of social environment, Sig. = Significant (one-tailed)

In the second analysis relative preference for foreign language university versus mother tongue university served as criterion variable in all steps. In the first model, relative preference for mother tongue versus foreign language university was predicted significantly ($F_{(4,416)} = 5.426$, $p< .001$), with 5 % of the variance accounted for by the predictors (see Table 30). Aptitude and SES and gender were the significant predictors of relative preference for mother tongue medium university versus foreign language medium university. Because dummy coding was used and the group that have high level of aptitude received a value of 1, the negative beta coefficient (β= -.128) indicated that low aptitude students relatively preferred mother tongue university to foreign language universities more than high aptitude students. Negative beta coefficient (β=-.109) of SES indicated that low SES students preferred mother tongue university to foreign language

universities more than their higher counterparts. Because dummy coding was used and

the male students received a value of 1, the positive beta coefficient (β= .081) indicated

that male students relatively preferred mother tongue university to foreign language

universities more than female students.

In the second model preference for mother tongue medium university versus

foreign language medium university was predicted significantly $(\Delta\ R^2 = .067,\ F_{(6,410)} =$

5.203, p< .001), with 11.7 % of the variance accounted for by predictors in which image

of the university was the only significant one. On the basis of regression results the

degree of importance given to image of the university (β= -.315) was negatively related

to preference for mother tongue medium university versus foreign language medium

university.

Table 30. Hierarchical Regression Results for Preference for Foreign Language
University vs. Mother tongue Medium University

Model	Dependent Variable	Independent Variables	B	SE B	β	R^2	Adjusted R^2	Change in R^2	Sig. F Change
1	Relative Preference for MotherL U vs ForeignL U					.050	.040	.050	.000
		Gender*	.332	.198	.081				
		Apt**	- .559	.210	-.128				
		SES*	-.241	.107	-.109				
		Rel	.104	.066	.077				
2	Relative Preference for MotherL U vs ForeignL U					.117	.095	.067	.000
		FinaF	.055	.105	.033				
		ICoE	.026	.114	.015				
		IImage***	-.704	.130	-.315				
		ISignP	.098	.099	.056				
		ISocEnv	.144	.112	.080				
		ILocation	-.006	.088	-.004				

Notes:
a) *** p < .001, ** p < .01, * p < .05
b) L= Language, U= University, Apt= Aptitude, Rel= Religiosity, FinaF= Financial factors, IcoE= importance of communication efforts, SignP= importance of Significant persons, ISocEnv= importance of social environment, Sig. = Significant (one-tailed)

CHAPTER SIX

DISCUSSION, IMPLICATIONS, AND LIMITATIONS

The purpose of this study is to examine five broad sets of relationships : (1) the effects of

students' background characteristics on their attitudes toward university; (2) the effects of

the university characteristics (image, social environment, affordability, financial aid

opportunities, location) on students' attitudes toward university; (3) the effects of

information sources (significant persons, communication efforts of university) on

students' attitudes toward university; (4) the moderating effect of the campus visit on the

relationship between information sources and university characteristics and attitude

toward university; (5) the effect of student's attitude toward university on his/her

preference for a university. In this chapter, the major findings of the study followed by

implications for higher education policy will be discussed and the chapter concludes with

a discussion of the limitations of the study.

Discussion of Results

This study enriches the university choice literature by investigating the effects of various

university choice factors on both attitudinal and behavioral responses and proposes that

students' attitude toward university mediates the relationship between university

characteristics, information sources, students characteristics and student's preference for a

university. As expected in all of the cases, it is found that while controlling other factors,

there is a positive relationship between students' attitudes toward university and

preference for a university. However, results also show that some factors have a significant effect only on students' attitudinal responses, while some have a significant effect on behavioral responses. For example, image (i.e Bogazici University, Sabanci University, Koc University) and affordability (i.e. Bogazici University and Sabanci Univerity) have a significant positive effect only on attitudinal responses, while the campus visit has a significant positive effect only on behavioral responses (i.e Bogazici University, Fatih University).

On the other hand, results demonstrate that in most of the cases advices from significant persons has a positive effect on both students' attitudinal and behavioral responses (i.e ITU, Koc University, Fatih University). This finding suggests that even if advices from significant persons have a direct effect on preferences, this factor also influence preferences through its effect on attitudinal responses.

Additionally, although not expected, results indicate that there is a negative relationship between students' perceptions of financial aid opportunities and their attitudes toward university (i.e Bogazici University, ITU, and Sabanci University). When coefficients are negative, it does not automatically mean that greater amounts of aid would reduce the attitudes toward university. St John et al. (1996) suggested that negative coefficients for student aid are attributable to the inadequacy of aid. That means negative coefficients could mean aid is insufficient, controlling for other factors that influence attitude toward university.

Moreover, results show that some factors related with student characteristics have a significant effect only on students' attitudinal responses, while some have a significant effect on behavioral responses. For instance, in most of the cases (i.e Fatih University, Koc University, ITU) SES has a significant effect only on attitudinal responses. Prior

research suggests that differences in tuition across universities may influence the type of university in which students enroll (Perna and Titus, 2004). In line with that, findings of the study reveal that high SES students prefer private universities (Fatih University and Koc University) while low SES students prefer public universities (ITU). Since the students with low SES is more sensitive in university costs, as measured by tuition plus other expenses and student financial aid, it is meaningful to find that the students that prefer public universities (as the tuition fees are quite low), are from low SES families and vice versa. Nevertheless results demonstrate that students' aptitude has a significant effect only on behavioral responses (i.e. Koc University, Sabanci University). Furthermore, religiosity is found to be a significant factor on both students' attitudinal and behavioral responses (Fatih University and Sabanci University).

Unexpectedly, the campus visit does not act as a moderator in the relationship between university perceptions and attitude toward university. Although, this result suggests that focusing on how the campus visit moderate the relationship between university perceptions and attitude toward university might lead to unsatisfactory and incomplete interpretations of students' university choice process, considering the direct influence of the campus visit on students' preference for a university it remains as an important factor to monitor.

Moreover, in this study the relationship between university characteristics, information sources, student characteristics and students' preference for a different type of university (public versus private and foreign language medium versus mother tongue medium) is also examined for exploratory purposes. Consistent with previous results, it is found that students relatively preferring public universities for private universities are more likely to be low SES.

154

In Turkey, while studies continue to show the advantages of educating children in their mother tongue, both for their later acquisition and transference of reading skills to other languages, and for their total gain from educational input, the mother tongue as medium of instruction still meets with resistance from many of the students who believed that knowing a foreign language is an important factor to compete in a globalized world and to get good jobs. Therefore, universities offering a foreign language in their programs accepted as prestigious universities that admit only so-called brightest students. Consistent with that, evidence from this study identifies prestige of the university as the significant influence in students' preference for a foreign language medium institute. Besides, consistent with the prior research that shows educational expectations are higher for boys (Hao and Bonstead-Bruns, 1998), it is found that students preferring for foreign language medium universities are significantly more likely to be male. Further, Hossler et al. (1989) found that as the level of SES increases students are more likely to choose more prestigious universities. Similarly, the results of this study indicate that high SES students are more likely to prefer foreign language medium universities than low SES students.

Taken together, these results suggest that university choice decision of prospective students is a complex one, affected by a wide range of decision factors such as personal characteristics (i.e SES, religiosity, and aptitude), other external influences such as parents, high school counselors, teachers, friends, relatives and internal influences such as image and affordability. Thus, it is very important to consider the effects of each factor on attitudinal and behavioral responses separately for each university for the accurate interpretation of the findings. Besides, such detailed data is useful in developing details included in marketing plans, appraising competitors, modifying universities to suit

155

student needs and formulating recruiting strategies. The implications of these findings for educational policy and future research are discussed later in this chapter.

Implications for Practice

Litten (1991) and Mintzberg (1996) have argued that university students typically wear four distinct hats, each characterizing a significant relationship they have with their institution during their period of study. When they make enquiries about enrollment, seek advice and guidance about university and major choices, and when they receive tutorial guidance from their tutors, they are probably wearing the "client" hat. When they become critical of indifferent teaching, inadequate facilities or poor or unresponsive administrative service (Sharrock, 2000)- in short, when their learning needs are not being adequately addressed- they wear their 'customer' hat and act in ways which seek to have greater customer satisfaction delivered. The main principle that could meaningfully be adopted by higher education institutions which come from the customer perspective is that the interests and needs of students are central to the organization. Relying on fundamental marketing concepts, in order to satisfy the needs and wants of the students institutions should identify these needs and wants clearly.

In Turkey, higher education environment becomes increasingly competitive and this research demonstrated that applicants of universities are no longer passive consumers in this environment. In this new challenging environment, delivering value to students thus become a core academic, management and administrative concern for contemporary higher education institutions. Within in this context, the educational literature suggests how imperative it is for educational institutions to actively monitor the quality of the

services they offer and to commit to continuous improvements in order to survive in the increasingly fierce competition for highly desirable students and the revenue they generate (Brigham, 1994; Dorweiler and Yakhou, 1994).

The use of marketing practices can increase the institution's value in students' minds; however, it only works when the school characteristics meet the students' predetermined criteria. The results of this study indicated that students concerned with the image of the university in their university selection process. Image is the way public perceives university or its programs. Image is the identity of the university. Although in this study the social environment is not considered as a very important aspect of students' university selection process, it is a part of university's identity. Therefore, it is believed that enriching student life at university can improve the prestige of the University as well as school/life balance for all students. Students want to attend a university that provides entertainment and atmosphere that will accommodate their needs as well as their wants. Having activities outside the class such as sports, student clubs; being located near restaurants, movie theaters, and clubs will attract more students. Such an environment will provide them places to go and relax, and to get away from the stress and pressure of their studies.

Besides, for the identity to work, it must be conveyed through every available communication vehicle. It should be diffused in ads, annual reports, brochures, websites, catalogs etc. Institutions should be more open to the public in order to provide opportunities for students and their parents to acquire up-to-date firsthand information. In this sense, information materials and other communications with students and significant persons such as face-to-face contacts should address the academic reputation of the institution as a whole, the academic reputation of the program and its faculty, the quality

157

of the students enrolled in the university, the anticipated knowledge and skill outcomes for graduates, the career possibilities and likely prospects, international exchange program opportunities, and so on. In short, image of the university should be to occupy a distinctive place in the minds of prospective students. Therefore, as part of a strategic marketing and recruitment plan the image of the university should be included in the customer analysis and communication tools should address what distinguishes the university from those other universities.

The findings of the study also revealed that affordability of the university plays a role in university choice decisions of prospect students. This finding suggests that universities need to carefully analyze cost/benefit factors for their institutions and effectively communicate those value calculations to prospect students. For factors of affordability, availability of housing expenses, food expenses, travel expenses and affordable tuition and offering convenient ways of paying tuition of the university are listed in this study. Greater investment in any or all of these aspects of affordability might improve a university's ability to recruit students, especially the low SES ones. Universities can modify existing marketing vehicles to tailor needs of different SES segments. The objective of modifying the vehicles is to develop either products or services, in the case of higher education, that especially meet the needs of that particular segment or develop promotional strategies that could be used with different segments. As a first step towards improving affordability for those less able to pay, universities need to find ways for more financial funding. After that they might implement their own financial strategies for those students.

Although the current study could not confirm financial aids provided by the university had a positive effect on students' preference for a particular university, it

remains as an important policy item to monitor. The fact that students do not consider financial aid opportunities such as grants, scholarships, free gifts, and part time job opportunities as playing a significant role in their choice may suggest a range of facts. It could be that they find the information related with that opportunities as inadequate or misleading. Concerning inadequate opportunities, universities should take steps to increase the availability of financial aids to increase the enrollment of students who cite cost as a barrier to choosing a particular university. Universities should seek ways to constitute a variety of funding opportunities for providing need-based financial aid for even a small number of students that would further enrich the university's diversity. The university should explore the provision of full grant packages that would include the cost of food, housing, travel and student activities that require students to fund out-of-pocket participation costs.

On the other hand, in Turkey, there are various types of financial aid opportunities available for all types of students. If the students are not aware that there are scholarships and other financial assistance opportunities available to help offset costs, universities need to consider better ways for promoting themselves to the recruitment market. Universities might devote funds to media campaign for promoting the availability of financial aids for all students or they can support additional financial aid staff at the institutional level to create public awareness and to communicate effectively with prospective students and their families.

Moreover, consistent with prior research, evidence from this study identifies significant persons (parents, relatives, friends, teachers, high school counselors) as the greatest influence in students' university selection. It seems that the university decision is more like a joint decision. Therefore, there is a need to discern whether a school's

primary customer is the student, parents, high school counselor or other third parties. Since marketing is a continual effort tailored to target customers, without knowing to whom the institution actually deals with and whose needs should be met, the efficacy of marketing cannot be measured in an accurate manner. Therefore, significant persons should be considered as an indirect marketing vehicle that can influence university choice in the favor of the marketed institution by the targeted communication strategies with the notion that significant persons' needs and perspectives may be different than that of students'.

Parental involvement certainly plays a large role in the university decisions of prospective students especially in an era of growing "highly involved parents" who are very hands on with their children's educational careers. As parents invest both emotionally and financially in the university choice process they are giving particular attention to the details of educational experience (school choice, school activities, assignments, and so on). Understanding the influence and expectations of parents might allow university administrators to be more effective in partnering with them. Therefore, policy makers and university admission offices should consider policies, practices, and programs encouraging proactive forms of parental involvement opportunities (e.g., conferences, volunteering, parent-student collaborations/discussions regarding educational matters, and the campus visits). These activities might enable parents to understand the school's structure and its instructional programs and provide basic experience in working with school personnel. These experiences can expand parents' knowledge and increase their credibility with school staff as they move into decision making roles. In addition, parents need to receive clear messages from the university: an overall institutional philosophy, clearly outlined paths to student success, the goals of

student development, and specifics about university structure and resources. Universities might provide programs for parents such as parent orientation, family weekend, parent advisory boards or associations to arm them with information to assist their children in their university choice process.

High school guidance counselors and teachers are also an important avenue for building awareness about universities, thus university admissions officers should build stronger partnerships with high school guidance counselors. Universities should ensure them to remain up-to-date about the current structure of university and changing trends. Universities should provide opportunities to high school counselors and teachers to spend more time visiting university campuses, engaging in conversations with university admission representatives, reading materials about universities.

Moreover, the campus visit does not act as a moderator in the relationship between university perceptions and attitude toward university. One possible reason for that is an incomplete or poorly conducted campus tour. Once the campus visits have been planned, it is crucial for students to decide what specifically they would like to accomplish during the visits. For that reason it is important to cover the concepts and structure that may positively influence students during the campus visit. Further research could offer suggestions and feedback that provide Office of Admission with tools to positively influence the visit.

Finally, universities have far to go in terms of sophisticated marketing, and particularly identifying and tailoring their offerings to actual market needs. Effective marketing requires the full commitment of the university management. Since the Office of Admission is the center of school management and the decision making, office should be willing to act as the change agent and the facilitator, initiating the change by

responding to dynamic challenges within higher education, and encouraging the necessary training of school members in the usage and acceptance of marketing concepts.

In addition, the Office of Admission must be willing to integrate required resources into marketing practices. When it comes to determining its efficacy, recruitment marketing should not be evaluated in isolation from important attributes that are more likely to motivate students to enroll. Besides, institutions need to increase use of marketing research in order to develop a systematic database in which the longitudinal nature of university choice can be derived. Some market research such as focus groups and student surveys can be employed to facilitate understanding about students' university choice behavior, students' perceptions of university image, campus environment and services and so on. Findings from the analysis will help the institution to adjust its current practices in order to make better use of its resources. In the view of its importance, this database should be revised on an annual basis and incorporated into long-term marketing effort.

Taken together, a full market analysis and a complete review of the operations, staffing, policies, and resource allocations through peer review and guidance from an external consultant will provide the university management with the tools it needs to continue to recruit and admit the top students throughout the nation and internationally, while maximizing efficiency and effectiveness.

Limitations and Directions for Future Research

The study is limited in a number of ways. First, data was collected with respect to five universities in Istanbul, Turkey that students perceive as representative of all the

162

universities in the city. However, including more universities would help to understand

the influence of university characteristics, information sources perceptions on students'

attitudes toward university and preference for a particular university better.

Second, the sampling method employed by this study also limits the generalizability of

the findings. Although a sample of 421 students was chosen by a two-stage area sampling

and the overall response rate of is quite high, the sample composition is limited to

Istanbul and these students may not be representative of the whole population of Turkish

students. Therefore, replication studies with varying sampling procedures and different

samples that reflect diverse demographic compositions are needed to provide more

confidence in these findings.

Third, this research consisted of a snapshot view of the limited number of

universities at a certain time period. Since longitudinal research captures temporal order

by assessing the influence of a predictor at a time subsequent to its cause, longitudinal

data is believed to possess superior causal inference ability (Jap and Anderson, 2004).

Thus, future research may benefit largely by extending the context through repeated

studies with the same measures. Besides, this study used only a Turkish context. A

comparative study may be recommended to researchers who wish to study on universities

in different cultures. Also, this comparison issue can also be extended within/across

cultures using longitudinal studies.

Concluding Remarks

This study has provided a general description of the factors influencing the university

choice of Turkish prospective students. It is hoped that this research will be beneficial to

both practitioners and academicians by generating knowledge that will lead to a better understanding, explanation and prediction in university choice decisions of Turkish students.

APPENDICES

APPENDIX A:

INITIAL POOL OF ITEMS

Construct& Items	Expert Judges	Factor Analysis
IMAGE		
1)I1-The [University name] has international exchange programs with numerous universities	Retained	Retained
2) I2-Graduates of the [University name] get good job opportunities	Retained	Retained
3) I3-The [University name] ' s faculty has a good reputation within the community	Retained	Retained
4) I4-The [University name] has a foreign language-medium instruction	Retained	Retained
5) I5-The [University name] has high rankings in OSYM booklet	Retained	Retained
6) I6-Graduates of the [University name] gain admission into top graduate schools	Retained	Retained
7)I7-The[University name] has close links with industry	Retained	Eliminated
8)I8-The political orientation of the [University name] suits me	Eliminated	-
SOCIAL ENVIRONMENT		
9) SE1- The [University name] has variety of student clubs	Retained	Retained
10)SE2- The [University name] offers various student activities outside the class (music festivals, film demonstrations etc.)	Retained	Retained
11)SE3- I like the open days of the [University name]	Retained	Retained
12)SE4-The [University name] has a wide range of majors	Retained	Retained
13)SE5- The campus of the [University name] attracts me a lot	Retained	Retained
14) SE6- The [University name] provides opportunities to participate in a variety of sports	Retained	Retained
LOCATION		
15)L1- Part of the city in which the [University name] located is very convenient	Retained	Retained
16) L2- It is easy to get into the [University name] from my home	Retained	Retained
AFFORDABILITY		
17) C1- The [University name] provides convenient ways of paying school fees	Retained	Retained
18) C2- The [University name] helps housing expenses	Retained	Retained
19) C3- The [University name] helps food expenses	Retained	Retained
20) C4- I can afford the tuition fees of the [University name]	Retained	Retained
21) C5- The [University name] provides internship opportunities	Retained	Retained
22) C6-The [University name] helps travel expenses	Retained	Retained
FINANCIAL AID		
23) FA1- The [University name] provides part-time job opportunities	Retained	Retained
24) FA2- The [University name] provides grant opportunities	Retained	Retained
25) FA3- The [University name] provides free gifts such as Laptops etc.	Retained	Retained
26) FA4- The [University name] provides various scholarship opportunities	Retained	Retained

27) FA5-The [University name] provides sports scholarships	Eliminated	-
SIGNIFICANT PERSONS		
28) SP1- My parents advice me to go the [University name]	Retained	Retained
29) SP2- My relatives who are graduates or current students of the [University name] advice me to go the [University name]	Retained	Retained
30)SP3- My friends advice me to go the [University name]	Retained	Retained
31) SP4- My teachers advice me to go the [University name]	Retained	Retained
32) SP5- My exam training center counselor advice me to go the [University name]	Retained	Retained
UNIVERSITY COMMUNICATION EFFORTS		
33) CE1- I like the [University name] ads in newspapers/magazines/billboards	Retained	Retained
34) CE2- I like the [University name]'s web site	Retained	Retained
35) CE3- The [University name]sending informative CDs and Brochures	Retained	Retained
36) CE4- I like the [University name] ads on TV	Retained	Retained
37) CE5- The [University name] sending informative catalogs	Retained	Retained
38) CE6- The [University name] attending education fairs	Retained	Retained
39) CE7-The authorities of the [University name] attending programs on TV	Retained	Eliminated

Üniversitelere Yönelik Öğrenci Davranışlarını Araştırma Anketi

Değerli Katılımcı,

Bu anket, üniversitelere yönelik öğrenci tutum ve davranışlarını incelemeyi amaçlayan akademik bir çalışmanın parçasıdır.

Sizden, bu anketteki sorulara cevap vererek katkıda bulunmanız rica edilmektedir.

Paylaşacağınız bilgiler sadece bu akademik çalışma kapsamında kullanılacak ve başka kişi, kurum veya kuruluşlarla hiçbir şekilde paylaşılmayacaktır.

Teşekkürler.

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A. Aşağıda üniversite seçiminde etkili olan bazı faktörler yer almaktadır. Bu faktörlerin SİZİN üniversite seçiminizde ne kadar önemli olduğunu en uygun rakamı işaretleyerek değerlendiriniz? (1= Hiç önemli değil 6= Çok Önemli)

Toplum gözünde üniversitenin prestiji	1 2 3 4 5 6
Ailenizin tavsiye etmiş olması	1 2 3 4 5 6
Üniversiteyi ziyaret etmek	1 2 3 4 5 6
Üniversitenin yurtdışındaki çeşitli üniversitelerde öğrenci değişim programları imkanı sunması	1 2 3 4 5 6
Okul ücretlerini ödemede kolaylıklar sunulması	1 2 3 4 5 6
Yurt yardımı yapılması	1 2 3 4 5 6
Çeşitli öğrenci klüplerinin olması	1 2 3 4 5 6
Üniversitenin yemek yardımı yapması	1 2 3 4 5 6
Eğitim ücretleri	1 2 3 4 5 6
Part-time (yarı zamanlı) çalışma fırsatlarının sunulması	1 2 3 4 5 6
O üniversitede okuyan veya mezun olmuş akrabaların tavsiyesi	1 2 3 4 5 6
Üniversitelerle ilgili dergi/gazete/billboardlarda yayınlanan reklamlar	1 2 3 4 5 6
Çeşitli ders dışı etkinliklerin olması (müzik festivalleri, film festivalleri vb.)	1 2 3 4 5 6
Üniversite tanıtım günleri	1 2 3 4 5 6
Çeşitli bölümlerde eğitim veriyor olması	1 2 3 4 5 6
Öğretmenlerinizin tavsiyesi	1 2 3 4 5 6
Üniversitenin verdiği spor bursları	1 2 3 4 5 6
Burs imkanlarının olması	1 2 3 4 5 6
Mezunlarının iyi üniversitlerde eğitimlerine devam etmeleri	1 2 3 4 5 6
Staj imkanları sunulması	1 2 3 4 5 6
Arkadaşlarınızın tavsiyesi	1 2 3 4 5 6
Üniversitenin web sitesi	1 2 3 4 5 6
Mezunlarının iyi iş imkanlarına sahip olmaları	1 2 3 4 5 6
Kampüsünün çekici olması	1 2 3 4 5 6
Eğitime katkıda bulunan eşya yardımı yapılması (Laptop vb.)	1 2 3 4 5 6

	1	2	3	4	5	6
Çeşitli spor faaliyetlerine katılma imkanının olması	1	2	3	4	5	6
Okula ya da dershaneye gönderilen üniversiteyi tanıtıcı CD / broşürler	1	2	3	4	5	6
Öğretim üyelerinin TV'de üniversite ile ilgili verdiği bilgiler	1	2	3	4	5	6
Üniversite ile ilgili televizyonda yayınlanan reklamlar	1	2	3	4	5	6
Lise danışmanlarınızın tavsiyesi	1	2	3	4	5	6
Üniversitenin şehrin içindeki yeri	1	2	3	4	5	6
ÖSYM tercih rehberinde üst sıralarda bulunması	1	2	3	4	5	6
Yabancı dilde eğitim verilmesi	1	2	3	4	5	6
Seyahat yardımı yapılması	1	2	3	4	5	6
Üniversitenin yaptığı para yardımı	1	2	3	4	5	6
Üniversitenin iş hayatı ile yakın ilişkilerinin olması	1	2	3	4	5	6
Eğitim fuarları	1	2	3	4	5	6
Üniversitenin tanıtım kataloğu	1	2	3	4	5	6
Üniversitenin politik duruşu	1	2	3	4	5	6
Ulaşım kolaylığı	1	2	3	4	5	6

B.   Üniversite sınavından istediğiniz puanı aldığınızı düşünerek lütfen .... Üniversitesi ile ilgili okuyacağım ifadelere ne derece katıldığınızı belirtir misiniz? (1= Kesinlikle Katılmıyorum 6= Kesinlikle Katılıyorum)

	1	2	3	4	5	6
Toplum gözünde prestijli bir üniversite	1	2	3	4	5	6
Ailemin tavsiye ettiği bir üniversite	1	2	3	4	5	6
Yurtdışındaki çeşitli üniversitelerde öğrenci değişim programlarına sahip	1	2	3	4	5	6
Okul ücretlerinin ödenmesinde kolaylıklar sunuyor	1	2	3	4	5	6
Yurt masraflarına yardımda bulunuyor	1	2	3	4	5	6
Çok çeşitli öğrenci klüplerine sahip	1	2	3	4	5	6
Yemek masraflarına yardımda bulunuyor	1	2	3	4	5	6
Eğitim masraflarını karşılayabilirim	1	2	3	4	5	6
Part-time (yarı zamanlı) çalışma fırsatları sunuyor	1	2	3	4	5	6
Bu üniversiteden mezun veya okuyan akrabalarımın tavsiye ettiği bir üniversite	1	2	3	4	5	6
Gazete, dergi ve billboardlarda yoğun reklam yapıyor	1	2	3	4	5	6

Ders dışı çok çeşitli etkinliklere sahip (müzik festivalleri,film festivalleri vb.)	1	2	3	4	5	6
Başarılı tanıtım günleri düzenlemektedir	1	2	3	4	5	6
Çeşitli alanlarda eğitim veriyor	1	2	3	4	5	6
Öğretmenlerimin tavsiye ettiği üniversite	1	2	3	4	5	6
Spor bursu imkani sunuyor	1	2	3	4	5	6
Çeşitli burs imkanları sunuyor	1	2	3	4	5	6
Mezunları iyi üniversitlerde eğitimlerine devam ediyorlar	1	2	3	4	5	6
İyi staj imkanları sunmaktadır	1	2	3	4	5	6
Arkadaşlarımın tavsiye ettiği bir üniversite	1	2	3	4	5	6
İyi tasarlanmış bir web sitesine sahip	1	2	3	4	5	6
Mezunları iyi iş imkanlarına sahip oluyorlar	1	2	3	4	5	6
Çok etkileyici bir kampüse sahip	1	2	3	4	5	6
Eğitime katkıda bulunan eşya yardımında bulunuyor (Laptop vb.)	1	2	3	4	5	6
Çok çeşitli spor faaliyetlerine katılma imkanı sunuyor	1	2	3	4	5	6
Bilgi verici CD ve broşürler gönderiyor	1	2	3	4	5	6
Öğretim üyeleri tanıtım yapmak için sık sık televizyon programlarına katılıyor	1	2	3	4	5	6
Televizyondaki reklamlarini begeniyorum	1	2	3	4	5	6
Lise danışmanımın tavsiye ettiği bir üniversite	1	2	3	4	5	6
Şehir içinde çok uygun bir yerde bulunuyor	1	2	3	4	5	6
ÖSYM tercih rehberinde üst sıralarda bulunuyor	1	2	3	4	5	6
Yabancı dilde eğitim verilmektedir	1	2	3	4	5	6
Seyahat masraflarıma yardımda bulunuyor	1	2	3	4	5	6
Çeşitli para yardımlarında bulunuyor	1	2	3	4	5	6
İş hayatı ile yakın ilişki içinde	1	2	3	4	5	6
Eğitim fuarlarına yoğun bir şekilde katılıyor	1	2	3	4	5	6
Bilgi verici bir tanıtım kataloğuna sahip	1	2	3	4	5	6
Üniversitenin politik duruşu bana uyuyor	1	2	3	4	5	6
Bu üniversiteye ulaşmak kolay	1	2	3	4	5	6

Boğaziçi Üniversitesi kampüsünü ziyaret ettiniz mi?   Evet _____ Hayır _____

ITU kampüsünü ziyaret ettiniz mi?   Evet _____Hayır _____

Sabancı Üniversitesi kampüsünü ziyaret ettiniz mi?   Evet _____ Hayır _____

Koç Üniversitesi kampüsünü ziyaret ettiniz mi?   Evet _____ Hayır _____

Fatih Üniversitesi kampüsünü ziyaret ettiniz mi?   Evet _____ Hayır _____

C. Üniversitelerin herbirini okuyacağım ifadelere göre nasıl

değerlendirdiğinizi belirtir misiniz.

Kötü	1 2 3 4 5 6	İyi
Sevmem	1 2 3 4 5 6	Severim
Vasat	1 2 3 4 5 6	Üstün
Çekici Değil	1 2 3 4 5 6	Çekici

D. ....Üniversitesini ne düzeyde tercih ettiğinizi belirtir misiniz
(1= Hiç tercih etmem 6= Çok tercih ederim)

Bogaziçi Üniversitesi	1 2 3 4 5 6
ITU	1 2 3 4 5 6
Sabanci Üniversitesi	1 2 3 4 5 6
Koc Üniversitesi	1 2 3 4 5 6
Fatih Üniversitesi	1 2 3 4 5 6

E. Lütfen aşağıdaki üniversite türlerini ne derece tercih ettiğinizi
işaretleyiniz

Vakıf Üniversitesi   1 2 3 4 5 6   Devlet Üniversitesi
  Yabanci Dilde   1 2 3 4 5 6   Anadilde
Egitim Veren Üniversite   Egitim Veren Üniversite

Cinsiyet: Kadın   _____
                  Erkek   _____

Mezuniyet Notunuz?   _____

Mezun Olduğunuz Lise Türü?   _____

Ailenizin ortalama gelir seviyesi: <1000TL _____
                              1000-1999 TL _____
                              2000-2999 TL _____
                              3000-3999 TL _____
                              4000-4999 TL _____
                                >5000TL _____
Annenizin eğitim durumu nedir? _____
Babanızın eğitim durumu nedir? _____

Lütfen aşağıdaki ifadelere ne derece katıldığınızı işaretleyiniz.
(1= Hiç Katılmıyorum 6= Kesinlikle Katılıyorum)
Dinim önemlidir çünkü hayatın anlamı ile ilgili
 birçok soruya cevap veriyor   1 2 3 4 5 6
 Hayatımı dinime göre yaşamaya çalışıyorum   1 2 3 4 5 6
 Hayata tüm yak aşımım dinime dayanmaktadır 1 2 3 4 5 6

Appendix C

University Choice Survey

Dear Participant,

This survey is part of an academic study that aims to gain insights on students'
university choice behaviors. You are kindly requested to support the research by
answering the following questions about ………. University.
The information you provide will only be used within the scope of this study and will
not be shared with any third parties

Thank you.

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A. There are many factors that students usually consider when choosing a particular university. Please indicate how important each of these factors would be to you when choosing a particular university. Please mark one of the numbers for each factor listed below (1= Not Important 6= Very Important)

Good reputation within the community	1 2 3 4 5 6
Advice from parents	1 2 3 4 5 6
Campus Visit	1 2 3 4 5 6
Availability of international exchange programs with numerous universities	1 2 3 4 5 6
Availability of convenient ways of paying school fees	1 2 3 4 5 6
Housing expenses provided by university	1 2 3 4 5 6
Availability of various student clubs	1 2 3 4 5 6
Food expenses provided by university	1 2 3 4 5 6
The cost of tuition fees	1 2 3 4 5 6
Availability of Part-time job opportunities	1 2 3 4 5 6
Advice from relatives who are graduates or current students of that university	1 2 3 4 5 6
Advertisements in newspapers/magazines/billboards	1 2 3 4 5 6
Student activities offered outside class (music festivals, film festivals etc.)	1 2 3 4 5 6
Open Days of University	1 2 3 4 5 6
Availability of various majors	1 2 3 4 5 6
Advice from teachers	1 2 3 4 5 6
Availability of sport grants	1 2 3 4 5 6
Availability of various scholarships	1 2 3 4 5 6
Graduates gain admission into top graduate schools	1 2 3 4 5 6
Availability of Internship opportunities	1 2 3 4 5 6
Advice from friends	1 2 3 4 5 6
Web site of the university	1 2 3 4 5 6
Graduates get good job opportunities	1 2 3 4 5 6
Attractiveness of campus	1 2 3 4 5 6
Free gifts offered by the university (Laptop etc.)	1 2 3 4 5 6
Opportunities to participate in a variety of sports	1 2 3 4 5 6
University CDs and Brochures	1 2 3 4 5 6
The information provided by the authorities of the university on TV	1 2 3 4 5 6
Advertisements on TV	1 2 3 4 5 6
Advice from high school / training center counselor	1 2 3 4 5 6
Part of the city in which university is located	1 2 3 4 5 6

Rankings in OSYM booklet	1 2 3 4 5 6
Foreign language-medium instruction	1 2 3 4 5 6
Traveling expenses provided by university	1 2 3 4 5 6
Availability of grants	1 2 3 4 5 6
Close links with industry	1 2 3 4 5 6
Education fairs	1 2 3 4 5 6
University catalog	1 2 3 4 5 6
Political view of the university	1 2 3 4 5 6
Ease of getting home	1 2 3 4 5 6

B. Suppose that you got the sufficient exam score for each of these universities (Boğaziçi, Istanbul, Sabanci, Koc, Fatih). Please indicate the level of agreement with the following items (1= Strongly Disagree 6= Strongly Agree)

This university's faculty has a good reputation within the community	1 2 3 4 5 6
My parents advice me to go this university	1 2 3 4 5 6
This university has international exchange programs with numerous universities	1 2 3 4 5 6
This university provides convenient ways of paying school fees	1 2 3 4 5 6
This university helps housing expenses	1 2 3 4 5 6
This university has variety of student clubs	1 2 3 4 5 6
This university helps food expenses	1 2 3 4 5 6
I can afford the tuition fees of this university	1 2 3 4 5 6
This university provides part-time job opportunities	1 2 3 4 5 6
My relatives who are graduates or current students of the university advice me to go this university	1 2 3 4 5 6
I like this university ads in newspapers/magazines/billboards	1 2 3 4 5 6
This university offers various student activities outside the class (music festivals, film demonstrations etc.)	1 2 3 4 5 6
I like the open days of this university	1 2 3 4 5 6
This university has a wide range of majors	1 2 3 4 5 6
My teachers advice me to go this university	1 2 3 4 5 6
This university provides sports scholarships	1 2 3 4 5 6
This university name provides various scholarship opportunities	1 2 3 4 5 6
Graduates of this university gain admission into top graduate schools	1 2 3 4 5 6
This university provides internship opportunities	1 2 3 4 5 6
My friends advice me to go the this university	1 2 3 4 5 6
I like this university's web site	1 2 3 4 5 6
Graduates of this university get good job opportunities	1 2 3 4 5 6
The campus of this university attracts me a lot	1 2 3 4 5 6

This university provides free gifts such as Laptops etc.	1	2	3	4	5	6
This university provides opportunities to participate in a variety of sports	1	2	3	4	5	6
This university sending informative CDs and Brochures	1	2	3	4	5	6
The authorities of this university attending programs on TV	1	2	3	4	5	6
I like this university ads on TV	1	2	3	4	5	6
My exam training center/high school counselor advice me to go this university	1	2	3	4	5	6
Part of the city in which this university located is very convenient	1	2	3	4	5	6
This university has high rankings in OSYM booklet	1	2	3	4	5	6
This university has a foreign language-medium instruction	1	2	3	4	5	6
This university helps travel expenses	1	2	3	4	5	6
This university provides grant opportunities	1	2	3	4	5	6
This university has close links with industry	1	2	3	4	5	6
This university attending education fairs	1	2	3	4	5	6
This university has informative catalogs	1	2	3	4	5	6
The political orientation of this university suits me	1	2	3	4	5	6
It is easy to get into this university from my home	1	2	3	4	5	6

Have you ever visited Boğaziçi University?   Yes _____ No _____

Have you ever visited ITU?   Yes _____ No _____

Have you ever visited Sabanci University?   Yes _____ No _____

Have you ever visited Koc University?   Yes _____ No _____

Have you ever visited Fatih University?   Yes _____ No _____

C. Please indicate how you evaluate the universities below relative
to other universities with respect to the following items

Bad	1	2	3	4	5	6	Good
Like	1	2	3	4	5	6	Dislike
Inferior	1	2	3	4	5	6	Superior
Unappealing	1	2	3	4	5	6	Appealing

D. Please indicate your preference level for the universities given below
(1= Not at all preffered, 6=strongly preffered)

     Bogaziçi Üniversitesi   1 2 3 4 5 6
     ITU   1 2 3 4 5 6
     Sabanci Üniversitesi   1 2 3 4 5 6
     Koc Üniversitesi   1 2 3 4 5 6
     Fatih Üniversitesi   1 2 3 4 5 6

E. Please indicate your preference level for the universities given below

   Private University   1 2 3 4 5 6 Public University
    Foreign Language 1 2 3 4 5 6 Mother Tongue
    Medium University   Medium University

Gender: Female   _____
               Male   _____

Your GPA?   _____

High School Attended?   _____

What is your household income level: <1000TL _____
                                  1000-1999 TL _____
                                  2000-2999 TL _____
                                  3000-3999 TL _____
                                  4000-4999 TL _____
                                    >5000TL _____
What is your mother's level of education? _____
What is your father's level of education? _____

Please indicate the level of agreement with the following items
(1= Strongly Disagree 6= Strongly Agree)

My religion is important because it answers many questions
about the meaning of life   1 2 3 4 5 6
I try hard to live all my life according to
my religious beliefs   1 2 3 4 5 6
My whole approach to life is based
on my religion   1 2 3 4 5 6

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